Kentucky Information Technology Standards (KITS)

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EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
1200	High Volume Scanners – Digital Imaging	Capable of Scanning resolutions between 300 & 9600 depending on the application. Use at least 256 levels of grey or 48 bit color. Compliance with CCITT Group III or IV. Minimum scan speed 100ppm duplex. Refer to ANSI/AIIM MS44-1998 (R1993) - Recommended Practice for Quality Control of Image Scanners.	I01.004.402	Platform > Peripheral > Computer Input Device	Inputs are the signals or data received by the system, and outputs are the signals or data sent from it. For the purposes of the IRM, computer input devices are those that provide data to the machine/application combination for further processing or for manipulation by users through the human-computer interface devices.	• Canon • Fujitsu • Hewlett Packard • Kodak See information on the scanning service offered by the Kentucky Department of Libraries and Archives.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015

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1310	Remote Network Access	All Remote Users must follow the security requirements set forth in this standard for any remote host accessing Commonwealth IT resources. Remote users must make every effort to secure the remote host used to access Commonwealth IT resources. All remote users are responsible for following applicable Commonwealth policy when handling Commonwelath data that has been accessed remotely. In addition, all remote users are also responsible for following any guidelines issued by their agency's Privacy/Compliance Officer, if applicable. Remote acess to the Commonwealth's network should only be achieved by using one of the approved products specified herein.	S03.002.003	Controls > Control Categories > Technical	The security controls (i.e., safeguards or countermeasures) for an information system that are primarily implemented and executed by the information system through mechanisms contained in the hardware, software, or firmware components of the system. See FIPS 200.	To request remote access, please complete COT Form F-181 and select one of the following options: IPSEC VPN SSL VPN NetMotion VPN	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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1320	Servers - Application / Database / Web	Must be able to run either z/OS, the UNIX / AIX / Linux operating systems, or Windows Server operating system. Wintel Server Minimum Configuration: One vCPU with 2 cores, 2 GB RAM. 80GB disk of disk space for Operating System and minimum 20GB for data. SMP Wintel Server: The minimum configuration of a server should reflect the resource requirements of the application. Initial application resource requirements plus at least one year of growth both in memory and processor capacity should reflect the minimum configuration requirement. Redundant power supplies.	I01.001.102	Platform > Hardware > Server – Midrange	A midrange computer is a medium-sized computer system or server. Midrange computers encompass a very broad range and reside in capacity between high-end PCs and mainframes. Formerly called "minicomputers", which were hosts to dumb terminals connected over dedicated cables, most midrange computers today function as servers in a network.	• IBM iSeries (Formerly AS/400 series. Approved for "upgrade only" for agencies previously designated as strategic AS/400 users.) • IBM pSeries (Formerly known as the RS/6000 series, for UNIX • IBM xSeries servers for Windows and Linux • IBM zSeries servers for z/OS • Sun Enterprise and Sunfire servers (for UNIX) • Wintel servers running the Microsoft Windows Server OS from Dell, HP/Compaq, IBM	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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1410	Desktop Computers	Desktop Base (Minimum) Configuration: • Processor: Intel G2030 Dual Core • Memory: 4 GB DDR3 • Storage: 250 GB SATA Hard Drive • Video: Integrated Graphics • Optional Video: 1 GB AMD Radeon Graphics • Power: Integrated Power Supply • Ports: Eight USB ports • Network Card: 10/100/1000 MB Integrated • Optical Drive: 16XDVD-ROM SATA • Monitor: 17" or 19" Flat Panel Display • Keyboard: USB Keyboard • Mouse: USB Optical Mouse • OS: Windows 7 Enterprise or Professional, 32 or 64 bit	I01.001.103	Platform > Hardware > Personal Computer – Desktop	A desktop computer is a personal computer in a form intended for regular use at a single location, as opposed to a mobile laptop or portable computer. A Personal Computer (PC) is any general-purpose computer whose size, capabilities, and original sales price make it useful for individuals, and which is intended to be operated directly by an end-user with no intervening computer operator.	Dell	**Effective:** 7/1/1997 **Revised:** 3/20/2013 **Reviewed:** 6/17/2015	

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1460	Notebook / Laptop Computers	Notebook/Laptop Base (Minimum) Configuration: • Processor: Intel Core i3 • Memory: 4 GB DDR3 • Storage: 320 GB SATA Primary Hard Drive • Video: Intel Integrated • Power: 90 W A/C Adapter, 6 Cell Li-ion battery • Ports: Four USB ports • Network Card: 10/100/1000 MB Integrated • Optical Drive: 8XDVD +/- RW • Monitor: 14" HD • Keyboard: Integrated • Mouse: Integrated Track Pad • OS: Windows 7 Enterprise or Professional, 64 bit • Wireless: Integrated 802.11n • Optional: Bundle includes: Port Replicator, 17" or 19" Flat Panel Display, USB External Keyboard, USB Optical Mouse, Standard Laptop Case	I01.001.104	Platform > Hardware > Personal Computer – Laptop	A laptop computer is a personal computer for mobile use. A Personal Computer (PC) is any general-purpose computer whose size, capabilities, and original sales price make it useful for individuals, and which is intended to be operated directly by an end-user with no intervening computer operator. A laptop integrates most of the typical components of a desktop computer, including a display, a keyboard, a pointing device such as a touchpad and speakers into a single unit.	Dell	**Effective:** 7/1/1997 **Revised:** 9/4/2014 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
1480	Mobile Computing Devices	All mobile computing devices should use endpoint encryption.	I01.001.105	Platform > Hardware > Mobile Computing Device	A mobile computing device is a small, hand-held computing device, typically having a display screen with touch input and/or a miniature keyboard and weighing less than 2 pounds (0.91 kg). Such devices have an Operating System (OS), and can run various types of application software, known as apps. Most devices can also be equipped with WI-FI, Bluetooth and GPS capabilities that can allow connections to the Internet and other Bluetooth capable devices such as an automobile or a microphone headset. A camera or media player feature for video or music files can also be typically found on these devices along with a stable battery power source such as a lithium battery.	Dell Venue, Apple iPad, Microsoft Surface Pro 3 (Surface Pro 3 must be encrypted with BitLocker. Surface Pro 3 support by COT pending contract vehicle and billing rate).	**Effective:** **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
1600	Printers	• Network printers must be Ethernet ready • SNMP Support • Support Postscript 2 functionality • Support PCL Level 5 or higher • Laser • Duplex Capable	I01.004.403	Platform > Peripheral > Computer Output Device	Inputs are the signals or data received by the system, and outputs are the signals or data sent from it. For the purposes of the IRM, computer output devices are those that provide data from the machine/application combination to other machines or to the user for asynchronous consumption.	Xerox MPS www.ky-mps.com Also see information on the volume printing services offered by the Kentucky Transportation Cabinet.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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1610	Multifunction Devices (MFD)	Minimum acceptable configuration: • TCP/IP • Ethernet • SNMP capable • Must support Postscript Level 2 and include PCL Level 5 or higher support. • Fax Modem - 56 Kbps • Color scan • Laser • Secure Print • Duplex	I01.004.403	Platform > Peripheral > Computer Output Device	Inputs are the signals or data received by the system, and outputs are the signals or data sent from it. For the purposes of the IRM, computer output devices are those that provide data from the machine/application combination to other machines or to the user for asynchronous consumption.	Xerox MPS www.ky-mps.com Also see information on the volume printing services offered by the Kentucky Transportation Cabinet.	**Effective:** 12/20/1999 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
1910	Smartphone	A smartphone is a mobile phone that offers more advanced computing ability and connectivity than a contemporary basic feature phone. Smartphones and feature phones may be thought of as handheld computers integrated with a mobile telephone, but while most feature phones are able to run applications based on platforms such as Java ME, a smartphone usually allows the user to install and run more advanced applications. Smartphones run complete operating system software proving a platform for application developers. All wireless phone devices are required to be password protected to prevent unauthorized access to wireless voicemail through Caller ID "spoofing". Please see "EAS Best Practice Recommendations" on page 6 of this document.	I01.001.105	Platform > Hardware > Mobile Computing Device	A mobile computing device is a small, hand-held computing device, typically having a display screen with touch input and/or a miniature keyboard and weighing less than 2 pounds (0.91 kg). Such devices have an Operating System (OS), and can run various types of application software, known as apps. Most devices can also be equipped with WI-FI, Bluetooth and GPS capabilities that can allow connections to the Internet and other Bluetooth capable devices such as an automobile or a microphone headset. A camera or media player feature for video or music files can also be typically found on these devices along with a stable battery power source such as a lithium battery.	Carriers: • AT&T Wireless • Sprint • T-Mobile • Verizon For agencies in the executive branch, AT&T will be the prime vendor. Executive branch agencies that may need service from one of the three alternate carriers must get approval in advance on this form: "Wireless Carrier Exception to AT&T Wireless Services Contract for Executive Branch Agencies". Devices: • BlackBerry (existing replacement only, not approved for new purchases) • Any smartphone device on AT&T price contract, including iPhones, are approved for use and do not require an exception.	**Effective:** 6/1/2006 **Revised:** 5/1/2014 **Reviewed:** 6/17/2015	

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2020	Open Source Software (OSS)	Open Source Software (OSS) is defined as "computer software for which the source code and certain other rights normally reserved for copyright holders are provided under a software license that meets the Open Source Definition or that is in the public domain. This permits users to use, change, and improve the software, and to redistribute it in modified or unmodified forms. (Wikipedia). Agencies are responsible for support of any OSS products they implement unless a written support agreement is in place between the agency and COT. Agencies should also thoroughly test all OSS products for both functionality and especially security, in a Test and/or QA environment before implementing in production. NOTE: One of the driving forces behind the utilization of OSS is an expectation of considerable cost savings as opposed to a closed source or vendor- owned software solution. Gartner research shows that the reality of cost optimization will vary from one open source solution to another but that approximately half of OSS adopters do not enjoy measurable cost savings. This depends in large part on the maturity of the IT organization, employee skills sets and the organization's ability to self- support OSS implementations. OSS products are required to undergo the same acceptance criteria for utilization in the Commonwealth's Executive Branch as Closed Source products. Security issues related to OSS products are similar to those related to proprietary software, in that vulnerabilities may be discovered by the vendor or community after implementation. Vendor software is	B10.813.327	General Government > Support delivery of state services > Enterprise Licenses and Software	Enterprise Licenses and Software includes License Management and Software Distribution; it supports the purchase, upgrade and tracking of legal usage contracts for system software and applications and supports the propagation, installation and upgrade of written computer programs, applications and components.	Agencies desiring to utilize OSS products as an enterprise level solution and that are not listed as approved enterprise standards must submit an Exception request to the ITSC for consideration through the established process. Approved open source products are listed within each specific domain's category(ies). An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.	**Effective:** 9/16/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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2020		more likely to have a set maintenance schedule for updates, security issues and bug fixes. Because of the large community supporting mature OSS products, fixes may be available in a more timely fashion.					

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2030	Freeware	Freeware is defined as "computer software that is available for use at no cost or for an optional fee. Freeware is generally proprietary (or closed source code) software available at zero price. The author usually restricts one or more rights to copy, distribute, and make derivative works of the software." (Wikipedia). One of the driving forces behind the utilization of freeware is an expectation of significant cost savings as opposed to a closed source or vendor-owned software solution. However, freeware lacks guaranteed long-term support from a software vendor. Because the source code is also not usually open to review or modification, the opportunity exists for embedded malicious code to allow unacceptable risks to the overall security of the Commonwealth infrastructure.	B10.813.327	General Government > Support delivery of state services > Enterprise Licenses and Software	Enterprise Licenses and Software includes License Management and Software Distribution; it supports the purchase, upgrade and tracking of legal usage contracts for system software and applications and supports the propagation, installation and upgrade of written computer programs, applications and components.	Agencies desiring to utilize Freeware products as an enterprise level solution, and that are not listed as approved enterprise standards, must submit an Exception request to the ITSC for consideration through the established process. Approved freeware products (if any) are listed within each specific domain's category(ies). Freeware software (including additional features) in these categories needs to be evaluated for adware, spyware, or malware before installation. An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.	**Effective:** 9/16/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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2040	Shareware	Shareware is defined as "proprietary software that is distributed without payment on a trial basis and is often limited by any combination of functionality, availability or convenience. Shareware is often offered as a download from an Internet website or as a compact disc included with a periodical such as a newspaper or magazine. The aim of shareware is to give buyers the opportunity to use the program and judge its usefulness before purchasing a license for the full version of the software. Shareware is usually offered as a trial version with certain features only available after the license is purchased, or as a full version, but for a trial period. Once the trial period has passed the program may stop running until a license is purchased. Shareware is often offered without support, updates, or help menus, which only become available with the purchase of a license. The words "free trial" or "trial version" are indicative of shareware." (Wikipedia). One of the driving forces behind the utilization of shareware is an expectation of examining the functionality of the software package without purchasing it. However, shareware frequently does not always provide full functionality as opposed to the fully licensed version.	B10.813.327	General Government > Support delivery of state services > Enterprise Licenses and Software	Enterprise Licenses and Software includes License Management and Software Distribution; it supports the purchase, upgrade and tracking of legal usage contracts for system software and applications and supports the propagation, installation and upgrade of written computer programs, applications and components.	Agencies desiring to utilize Shareware products as an enterprise level solution, and that are not listed as approved enterprise standards, must submit an Exception request to the ITSC for consideration through the established process. Approved shareware products (if any) are listed within each specific domain's category(ies). Shareware software (including additional features) in these categories needs to be evaluated for adware, spyware, or malware before installation. An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.	**Effective:** 9/16/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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2050	Cloud Computing	Cloud computing is defined as "a style of computing in which massively scalable IT-enabled capabilities are delivered 'as a service' to multiple customers using Internet Technology." (Gartner) Cloud computing services often provide common business applications (email, document create, etc) online that are accessed from a web browser, while the software and data are stored on the service provider's servers. One of the driving forces behind the utilization of "the cloud" is an expectation of significant cost savings as opposed to a closed source or vendor-owned software solution. However, cloud computing currently lacks security and privacy guarantees necessary to support much of government's internal functions. Some concerns that are not fully defined include, but are not limited to: the physical location of the data (U.S. vs. overseas), sanitation of equipment prior to disposal, security vulnerabilities of the applications themselves, security vulnerabilities of data in transit, and audit logging and regulatory compliance become very prohibitively complex. A lack of standards within the industry, at the present time, creates unacceptable levels of risks to the overall security of the Commonwealth's data. Recordkeeping implications of Cloud Computing are examined by KDLA in the document named 'Cloud Computing: Implications and Guidelines for Records Management in Kentucky State Government' which is available at http://kdla.ky.gov/records/Documents/Cloud%20Computing%20Guidelines%20Version%201.pdf	B10.802.354	General Government > Executive direction and management > IT Strategy and Innovation	IT Strategy and Innovation includes all activities outside of normal Strategic Planning that focus on trying new approaches, new systems and thinking about/ planning IT investments in different ways.	Agencies desiring to utilize Cloud Computing products as an enterprise level solution must submit an Exception request to the ITSC for consideration through the established process. An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.	**Effective:** 9/16/2009 **Revised:** 8/19/2015 **Reviewed:** 8/19/2015	

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2100	Operating System (O/S) – Desktop and Laptop / Notebook	32-bit or 64-bit operating system with graphical user interface for Intel processor compatible platform.	I01.002.203	Platform > Operating System > Personal Computer	For personal computers, operating systems are generally tailored to the needs of users on standalone machines that may or may not connect to a network, and are generally not servers of information to large numbers of other machines.	• Microsoft Windows 8.1 Enterprise - Windows 8.1 (32 bit and 64 bit) is approved as a standard product. Agencies must test existing applications thoroughly before migrating to Windows 8.1. Hardware must meet all requirements • Microsoft Windows 7 Enterprise - Windows 7 SP1 (32 bit and 64 bit) is approved as a standard product. Agencies must test existing applications thoroughly before migrating to Windows 7 SP1. Hardware must meet all requirements. Disapproved for further use: • Microsoft Windows XP Professional Extended Support ended 4/8/2014. • Microsoft Windows 2000 Professional: Sunset date 7/13/2010 • Microsoft Windows 98: Sunset date 07/11/2006 • Microsoft Windows 95: Sunset date 06/30/2002	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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2110	Operating System – Server	For zSeries enterprise servers: POSIX compliant 64-bit operating system. For RISC platforms: POSIX compliant 64-bit operating system. For Intel platforms: 32-bit or 64-bit operating system.	I01.002.201	Platform > Operating System > Server – Mainframe or Supercomputer	A mainframe or supercomputer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Mainframe operating systems are tailored to meet the substantially different architectures and purposes of mainframes as high-volume transaction processing devices, or the purposes of supercomputers as high-volume algorithmic processors.	• IBM AIX 6.1 and newer IBM AIX 5.3 moved to EOS (End of Support) April, 2012. Any remaining customer systems on 5.2 are charged for extended support. • IBM z/OS • Microsoft Windows 2012 Server • Microsoft Windows 2008 Server R2 • Microsoft Windows 2003 Server. Extended support is slated to end on 7/14/2015. • Oracle Solaris • Red Hat Linux 5.6 and newer • UNIX	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2110	Operating System – Server	For zSeries enterprise servers: POSIX compliant 64-bit operating system. For RISC platforms: POSIX compliant 64-bit operating system. For Intel platforms: 32-bit or 64-bit operating system.	I01.002.202	Platform > Operating System > Server – Midrange	A midrange computer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Midrange computers are almost universally known as servers to recognize that they often "serve" applications to end users at "client" computers, that they use a client/server computing model.	• IBM AIX 6.1 and newer IBM AIX 5.3 moved to EOS (End of Support) April, 2012. Any remaining customer systems on 5.2 are charged for extended support. • IBM z/OS • Microsoft Windows 2012 Server • Microsoft Windows 2008 Server R2 • Microsoft Windows 2003 Server. Extended support is slated to end on 7/14/2015. • Oracle Solaris • Red Hat Linux 5.6 and newer • UNIX	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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2200	Remote Desktop Control Software	Requires a PPP TCP/IP based connection. All transmissions must be encrypted using the Secure Sockets Layer (SSL) protocol, and require a non-anonymous login before establishing the session connection. Remote Desktop Control Software is grouped into three categories, depending on its intended purpose: • Single User (a user accesses their workstation desktop remotely) • Multi User (many users execute applications remotely) • Remote Administration (system administrators' access user workstations in order to debug problems and make configuration changes.	A02.030.KY003	Application Components > Unified Communications and Collaboration > Remote Desktop Control	Software for controlling a computer remotely via another device that's connected through a network or the Internet. Remote desktop software enables the user to see and control a connected PC as though they are sitting directly in front of it.	Single User: • Symantec pcAnywhere Not approved for new installs. • Windows Remote Desktop Services Multi User: • Citrix (GoToMeeting, GoToWebinar, GoToTraining, XenApp) • Remote Desktop Services (formerly Windows Server 2008 Terminal Services) • Windows Server Terminal Services Remote Administration: • Client Management Suite (Symantec) • DameWare • LANDesk • Microsoft System Center Configuration Manager (SCCM) • Microsoft System Management Server (SMS) • Windows Remote Assistance feature • Webex	**Effective:** 7/1/1997 **Revised:** 1/18/2012 **Reviewed:** 6/17/2015	
2210	Host Print	TCP/IP host printing	I01.005.506	Platform > Virtualization > Print Server	Print server virtualization extends the virtualization concept to the access to and management of print resources. For the purposes of the IRM, a print server can be a dedicated device, a standalone computer, specialized software, or some combination that handles receipt, queuing, delivery, and status of print jobs for printers on the network.	Brooks Remote Print Manager (RPM)	**Effective:** 7/1/1997 **Revised:** 12/1/2008 **Reviewed:** 6/17/2015	

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2250	Barcoding Software	Software must adhere to the following: Barcode Support: • Industry standard adherence • Precise bar width specification • Stretchable Bar Width specification • Database integration barcodes • Advanced Serialization • Sequentially Numbered Bar Codes • Print-time Data Prompt • Start/Stop character specification • Human readable text options • Automatic Check Digit • Wide-to-narrow bar specification • Fixed Data Source • Human Readable Text Formatting • Variable Data Source - database and counter (2D) Industry Standard: • PDF417 (Truncation, ECC Level, Data Columns) • Micro PDF417 • Data Matrix (Square and Rectangular) • QR • Micro QR (Linear) Standard: • Australian Post 4-State • CODE128 (Auto) • CODE128 (A, B, C) • CODE39 • CODE39 FULL ASCII • CODE93 • EAN13 (with extension support) • EAN8 (with extension support) • HIBC • GS1-128 • GS1 DataBar-14 • GS1 DataBar Limited • GS1 DataBar Stacked • GS1 DataBar Stacked Omnidirectional • GS1 DataBar Truncated • I2OF5 • Circular I2OF5 • ISBN (with extension support) • ISBN 13 (with extension support) • ISMN • ISSN (with extension support) • MSI • POSTNET • RATIONAL CODABAR • RSS14 • RSS14 Limited • RSS14 Stacked • RSS14 Stacked Omnidirectional • RSS14 Truncated • S2OF5	A02.031.381	Application Components > Visualization > Charting	Software to develop graphical representation of data in which the data is represented by symbols such as bars, lines, slices, dots, size, etc.	NOTE: Due to the large number of Barcoding products available, no product standard is listed. However, be advised an Enterprise License is available for TechnoRiver Studio Pro.	**Effective:** 3/20/2013 **Revised:** **Reviewed:** 6/17/2015

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2250		• UCCEAN128 (Full AI Wizard support) • UPCA (with extension support) • UPCE (with extension support) • UPC Extension 2 • UPC Extension 5 • USPS ONECODE						
2300	Statistical	Software that operates across the range of platforms used by applications in the commonwealth (desktop, midrange, mainframe) that can extract data, store in various formats, can group data, and can perform all required statistical processes and tests.	A02.020.206	Application Components > Analysis, Reporting and Statistics > Mathematical	Software that provides an environment for statistical analysis, predictive and descriptive modeling, data mining, forecasting, optimization, simulation.	• SPSS (IBM) • Statistical Analysis System (SAS), available for a number of platforms, including desktop, midrange, and mainframe.	**Effective:** 7/1/1997 **Revised:** 12/1/2008 **Reviewed:** 6/17/2015	
2310	Business Intelligence Software	BI software capable of accessing and integrating data across the diverse range of IT platforms (LAN, departmental, midrange, mainframe) used by applications in the commonwealth, and that can query and extract data, analyze data, group data, store in various formats and can perform all required analytical processes and tests.	A02.020.202	Application Components > Analysis, Reporting and Statistics > Business Intelligence	Software to support identifying, extracting, and analyzing business data, such as performance and cost metrics to support better business decision-making.	• BusinessObjects Software Suite from SAP	**Effective:** 11/1/2005 **Revised:** 1/19/2011 **Reviewed:** 6/17/2015	

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2330	Electronic Documents – Final Version for Distribution	Portable Document Format (PDF) is the approved format for the creation of final official copies of records for distribution. NOTE: PDF/A, ISO 19005-1:2005 (archival) is the required format for long term document storage to comply with KDLA requirements. PDF, ISO 32000-1:2008 (non-archival) is the standard for short term document storage where archival storage is not a requirement.	A02.023.265	Application Components > Document and Content Management > Records Management	Software that supports the management and stewardship of a type of information by the government in order to facilitate communication and information archival.	NOTE: Due to the large number of products now capable of producing electronic forms, no product standard is listed.	**Effective:** 3/5/1999 **Revised:** 1/18/2012 **Reviewed:** 6/17/2015	
2340	Electronic Forms	Various trade and industry associations provide guidelines for the development and design of forms; however no de facto standards exist for electronic forms. Standards do exist for the interface with other applications and these must be followed: • compliant for links to approved databases • MAPI compliant for use with Microsoft Exchange messaging system • TCP/IP compliant for Internet distribution • Microsoft Internet Explorer, Mozilla Firefox and Google Chrome compliant	A02.023.263	Application Components > Document and Content Management > Forms Management	Software that supports the creation, modification, and usage of physical or electronic documents used to capture information within the business cycle.	NOTE: Due to the large number of products now capable of producing electronic forms, no product standard is listed.	**Effective:** 3/5/1999 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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2370	Electronic Commerce – Electronic Signature	KRS 369.101 to 369.120 -Uniform Electronic Transactions Act (UETA as enacted by the 2000 General Assembly). IETF (Internet Engineering Task Force) X.509 Public Key Infrastructure (PKI latest version for digital certificates) Interoperates and fully supports critical enterprise infrastructure services and applications such as network protocols, desktop operating systems, e-mail, web servers, database management software, firewalls and directory services. Symmetric encryption algorithms required for securing content: U.S. Data Encryption Standard (DES) in accordance with U.S. FIPS PUB 46-2 and ANSI X3.92 and Triple-DES in accordance with ANSI X9.52 Also refer to the KY Department of Libraries and Archives "Understanding Records Management: Electronic Records" web page. Under the "Guidance" heading select "Electronic Signature Recordkeeping guidelines".	A02.029.341	Application Components > Security Controls > Digital Signature	Software to use and manage electronic signatures to support.	• Entrust suite of PKI enabled products for digital signature technology and securing e-mail transport of content and attachments. • Microsoft Forefront Identity Manager 2010 • Silanis e-Sign Desktop provides a solution for electronically signing documents and routing for approval via workflow.	**Effective:** 7/1/1997 **Revised:** 1/18/2012 **Reviewed:** 6/17/2015	

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2400	Database Management Software	ANSI SQL-92	A02.021.226	Application Components > Data Management > Database Management System	Software that supports the storage, modification, extraction, and search for information within a database.	Enterprise Database Servers: • UNIX/Linux platform: IBM DB2, Oracle, MySQL** • Windows platform: MySQL** • Wintel platform: Microsoft SQL Server, and Oracle • z/OS platform: IBM DB2 ** Agency Advisory – MySQL is currently NOT supported by the Commonwealth Office of Technology (COT). Agencies must take this under advisement when considering use for Enterprise Applications and/or critical data. Desktop Databases: NOTE: The development and use of desktop databases is discouraged because of the stated architectural direction to share data on common server platforms. • FileMaker Pro • IBM DB2 Personal Edition - For development use only. • Microsoft Access: - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; - 2007 version extended support ends 10/10/2017. • Microsoft SQL Express • Oracle Database Express Edition (Oracle Database XE) 11g or higher	**Effective:** 7/1/1997 **Revised:** 11/3/2014 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	

2500	Office Suite - Desktop and Notebook / Laptop	Supported by the approved operating systems for desktop and notebook computers.
		Graphical User Interface functionality and compatibility among all tools in the office suite. Integrated import and export support.
			A02.028.KY001	Application Components > Productivity > Office Suite	Software suite used for word processing, spreadsheet, presentation etc. This category is for application components that performs multiple functions.	• Microsoft Office:
						  For documents that interact with eMARS Advantage Financial and Procurement, Office 2003 format is required.
						  - 2013 version: is not approved for use with eMARS applications at this time. Extended support slated to end 04/11/2023.
						  - 2010 version: is not approved for use with eMARS applications at this time. Extended support slated to end 10/13/2020.
						  - 2007 version: Extended support slated to end 10/10/2017.
							Effective: 7/1/1997
							
							Revised: 6/17/2015
							
							Reviewed: 6/17/2015	

2600	Electronic Mail, Messaging and Collaboration	• Messaging Application Programming Interface (MAPI) • Simple Mail Transport Protocol (SMTP) Also see category for Recordkeeping – Electronic Mail.	A02.030.361	Application Components > Unified Communications and Collaboration > Email	Software that supports the transmission of memos and messages over a network.	Client Software: Microsoft Outlook: - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; Server Software: • Avaya Unified Messaging: CallPilot • Microsoft Exchange Server	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2610	Fax Software	Client/server fax software fully integrated with Microsoft Exchange and Outlook client software.	A02.030.KY004	Application Components > Unified Communications and Collaboration > Fax Software	Software used for sending Fax from Outlook (Exchange) Email.	• Avaya Unified Messaging: CallPilot • eCopy (Nuance) • Fax2Mail • Genifax (Omtool) - being phased out in 2015	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2640	FTP and Secure FTP Server	Any FTP of classified data must be performed utilizing either ftps or sftp. This category only applies to Windows servers. See also the category for Data Classification.	A03.040.011	Interface > Application Interface > FTP	Standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. File Transfer Protocol (FTP) is built on a client-server architecture and uses separate control and data connections between the client and server.	• MoveIT DMZ • WS_FTP (Ipswitch)	**Effective:** 11/18/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2650	FTP Client and Secure FTP Client Software	Any FTP of classified data must be performed utilizing either ftps or sftp. Software for use as Client only, Server use requires an Exception request. Clients need to be FIPS compliant for Secure FTP options. See also the category for Data Classification.	A03.040.011	Interface > Application Interface > FTP	Standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. File Transfer Protocol (FTP) is built on a client-server architecture and uses separate control and data connections between the client and server.	• Cygwin • FileZilla • FireFTP • PuTTY • WS_FTP (Ipswitch)	**Effective:** 11/3/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2700	Publishing – Desktop		A02.028.KY002	Application Components > Productivity > Desktop Publishing	Software used for the creation of documents using page layout skills on a personal computer. Desktop publishing software can generate layouts and produce typographic quality text and images comparable to traditional typography and printing. This technology allows individuals, businesses, and other organizations to self-publish a wide range of printed matter (Ref:Wikipedia).	• Adobe Creative Suite • Microsoft Publisher: - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; - 2007 version extended support ends 10/10/2017	**Effective:** 7/1/1997 **Revised:** 11/3/2014 **Reviewed:** 6/17/2015	
2705	HTML Authoring and Web Publishing	World Wide Web Consortium (W3C) standards (HTML 3.2 is an SGML application conforming to International Standard ISO 8879). Full support for HTML 3.2 features as defined by the Internet Engineering Task Force (IETF) and the World Wide Web Consortium (W3C). This is the recommended minimum standard, although HTML 4.0 is the preferred development standard for new applications. See also Application Development category.	A02.023.266	Application Components > Document and Content Management > Web Content Management	Software that provides content authoring, content review and approval, tagging and aggregation, content publishing and delivery, and syndication management.	• Adobe Creative Suite • Microsoft Expression Only versions currently under mainstream support from Microsoft are authorized for new installation. • Microsoft SharePoint Designer: - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; - 2007 version extended support ends 10/10/2017 • Microsoft Visual Studio: - 2012 version extended support ends 04/11/2023; - 2010 version extended support ends 09/08/2020; - 2008 version extended support ends 04/10/2018 - 2005 version (Not for new installs) extended support ends 04/12/2016	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2710	Advanced Drawing – Computer Aided Drafting	CAD/CADD software generally comes with component libraries, or has component libraries available from third party sources. These component representations must meet the standards applicable to the particular discipline (i.e., IEEE, etc.). In addition, AutoCAD has developed drawing file formats (DXF and DWG) that have become the de facto standards for CADD systems.	A02.031.383	Application Components > Visualization > Computer Aided Design (CAD)	Software that supports the use of computer technology for the process of design and design-documentation and includes software or environments which provide the user with input-tools for the purpose of streamlining design processes; drafting, documentation, and manufacturing processes.	• Entry Level: AutoCAD LT • Full-CADD: AutoCAD (latest version released)	**Effective:** 7/1/1997 **Revised:** 6/1/2006 **Reviewed:** 6/17/2015	
2720	Advanced Drawing / Illustration / Diagramming		A02.028.330	Application Components > Productivity > Drawing	Software used to create or edit a graphical object.	• Adobe Creative Suite • CorelDraw • Microsoft Visio for Diagramming	**Effective:** 7/1/1997 **Revised:** 1/19/2011 **Reviewed:** 6/17/2015	
2800	Geographic Information Systems (GIS) – Server Software	Compatible with the approved server operating systems.	A02.024.385	Application Components > Geospatial Information > Geospatial Data Analysis	Supports the application of statistical analysis and other informational techniques to geographically based data.	ArcGIS Server (Server-based GIS), and ArcSDE (Enterprise-class Geospatial Storage Environment) and its ancillary modules for the Windows Server Environment, from ESRI.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2800	Geographic Information Systems (GIS) – Server Software	Compatible with the approved server operating systems.	A02.024.382	Application Components > Geospatial Information > Collection and Manipulation of Satellite and Aerial Photographs	Software which supports the modification or analysis of imagery information.	ArcGIS Server (Server-based GIS), and ArcSDE (Enterprise-class Geospatial Storage Environment) and its ancillary modules for the Windows Server Environment, from ESRI.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.382	Application Components > Geospatial Information > Collection and Manipulation of Satellite and Aerial Photographs	Software which supports the modification or analysis of imagery information.	ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.385	Application Components > Geospatial Information > Geospatial Data Analysis	Supports the application of statistical analysis and other informational techniques to geographically based data.	ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.386	Application Components > Geospatial Information > Geospatial Data Collection	Software that supports the collection or management of geospatial information.	ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.389	Application Components > Geospatial Information > Imagery	Software that supports the collection of information via satellite and aerial photography.	ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.380	Application Components > Geospatial Information > Cartography	Software that supports the creation of maps.	ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2850	Imaging Solution - OCR/ICR Software	OCR software offered by vendors on price contract.	A02.023.260	Application Components > Document and Content Management > Document Imaging and OCR	Software that supports the document scanning and the interpretation of images into text.	OmniPage for standalone OCR. OCR software supplied with approved multifunction products is permitted.	**Effective:**	7/1/1997
							Revised:	6/17/2015
							Reviewed:	6/17/2015
2860	Imaging Solution – Workflow Software	Workflow software offered by vendors on price contract.	A02.023.260	Application Components > Document and Content Management > Document Imaging and OCR	Software that supports the document scanning and the interpretation of images into text.	• FileNet • KnowledgeLake • Nintex	**Effective:**	7/1/1997
							Revised:	3/20/2013
							Reviewed:	6/17/2015
2870	Imaging Solution - Control Software for Imaging	Imaging control software offered by vendors on price contract.	A02.023.260	Application Components > Document and Content Management > Document Imaging and OCR	Software that supports the document scanning and the interpretation of images into text.	• FileNet • KnowledgeLake	**Effective:**	7/1/1997
							Revised:	3/20/2009
							Reviewed:	6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2920	Web Content Management Software	• Web Content Accessibility Guidelines (WCAGs) - Priority 1 and Priority 2 published by the World Wide Web Consortium (W3C) • Hypertext Markup Language - HTML 4.01 • Extensible Hypertext Markup Language - XHTML 1.0 • Cascading Style Sheet - CSS Levels 1 & 2 • Document Object Model - DOM Level 1 • Synchronized Multimedia Integration Language - SMIL 2.0 • JavaScript & Dynamic HTML – DHTML • Simple Object Access Protocol (SOAP) Also, see standard category for Internet/WWW Design and Publishing.	A02.023.266	Application Components > Document and Content Management > Web Content Management	Software that provides content authoring, content review and approval, tagging and aggregation, content publishing and delivery, and syndication management.	• DotNetNuke – (Must Reference Category 2020 – Open Source Software) • Microsoft Content Management Server 2002 Version: Extended support slated to end 4/8/2014. • Microsoft Office SharePoint - 2013 version extended support ends 04/11/2023 - 2010 version extended support ends 10/13/2020 - 2007 version extended support ends 10/10/2017	**Effective:** 6/1/2006 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2930	E-Learning Software	E-learning software capable of producing rich e-learning content, able to access and integrate content from a diverse range of sources used in commonwealth e-learning applications, capable of supporting student and instructor collaboration, and capable of efficiently delivering content across the Internet.	A01.007.042	System > Human Resource Management > Education / Training	Software that supports the design, development, and implementation of a comprehensive employee development and training approach to ensure that agency employees have the right competencies.	• SumTotal Learn for corporate and academic e-learning requirements (eLMS). • Blackboard Academic Suite from Blackboard, Inc. for legacy academic and corporate e-learning requirements (which includes Elluminate). • Articulate eLearning Software	**Effective:** 4/7/2006 **Revised:** 5/6/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
2940	Help Desk Software	Must support IT Service Management and ITIL processes and provide compatibility with a wide range of products used in supporting IT infrastructure.	A01.002.010	System > Customer Service > Call Center / Help Desk	Software that supports the management of a service center to respond to government and contract employees' technical and administrative questions.	• ITSM from Front Range Solutions USA, Inc. • HEAT from Front Range Solutions USA, Inc. • Symantec Service Desk	**Effective:** 6/1/2006 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
2950	Server Virtualization Software		I01.002.202	Platform > Operating System > Server – Midrange	A midrange computer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Midrange computers are almost universally known as servers to recognize that they often "serve" applications to end users at "client" computers, that they use a client/server computing model.	For the Wintel server environment: • Microsoft Windows Server 2012 • Microsoft Windows Server 2008 R2 Extended support slated to end 7/9/2018. • Microsoft Windows Server 2008 R2 Virtualization with Hyper-V. Extended support slated to end 7/9/2018. • Microsoft Virtual Server 2005 R2 Extended support slated to end 1/13/2015. • VMware from EMC Corp.	**Effective:** 6/1/2006 **Revised:** 3/20/2013 **Reviewed:** 6/17/2015	
3100	Cable Plant	Category 6, unshielded twisted pair (UTP) copper cable up to a maximum of 295-feet; OR 8.3/125 micron single mode fiber cable; OR 50/125 micron multimode fiber optic cable LC connectors	I02.003.302	Network > Infrastructure > Transmission Medium	Transmission medium is the material and/or technology that carries signal from one location to another.	Systimax products with Corning fiber: Systimax products with Corning fiber: • Category 6, unshielded twisted pair (UTP) copper cable; • OR 8.3/125 Single mode fiber cable; • OR 50/125 Multimode fiber optic cable.	**Effective:** 7/1/1997 **Revised:** 12/1/2008 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
3110	Cable Plant Installation	Cable plant installation based on current industry standards. The following are applicable: • TIA/EIA-568-B.1-7 Commercial Building Telecommunications Wiring Standard and its appendix and all addendums • TIA/EIA-568-B.2-11 Commercial Building Telecommunications Wiring Standard and its appendix and all addendums • TIA/EIA-569-B Commercial Building Standard for Telecommunications Pathways and Spaces • TIA/EIA-570-B Residential and Light Commercial Telecommunications Wiring Standard • TIA/EIA-606 Administrative Standard for the Telecommunications Infrastructure of Commercial Building • J-STD-607-A Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications • TIA/EIA-758-A Customer Owned Outside Plant Telecommunications Infrastructure Standard • TIA/EIA-526-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant • TIA-EIA-526-14-A Optical Power Loss Measurements of Install Multimode fiber Cable Plant • TIA/EIA-568-3-3.1 Optical Fiber Cabling Components Standard • TIA/EIA-598-C Optical fiber Cable Color Code • TIA-758-A Customer Owned Outside Plant Telecommunications Infrastructure • National Electric Code • National Electric Safety Code • ASTM E814 Fire Stopping • ISO/IEC 11801: 2002/AMD 1 • TSB 162 Telecommunications Cabling Guidelines for Wireless Access Points • TIA-942 Telecommunications Infrastructure Standard for Data Centers	I02.003.302	Network > Infrastructure > Transmission Medium	Transmission medium is the material and/or technology that carries signal from one location to another.		**Effective:** 7/7/1997 **Revised:** **Reviewed:** 6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3110		• IEEE 802.3 Ethernet • IEEE 802.11 b/g/n WLAN • IEEE 802.16 WiMax • TIA-1003 Requirements for a Wireless LAN Based IP Telephony Endpoint						
3200	Network Protocols	TCP/IP - the only protocol supported by the Commonwealth Office of Technology after December 31, 1998. For details, see the Agency Contact Memo at Agency Contact Memo 9707-01 Ethernet - LAN topology	I02.004.409	Network > Transmission Type > Transmission Protocol	Transmission Protocol is a category that allows grouping and identification of various transmission standards, at a basic level in the OSI stack.		**Effective:**	7/1/1997
							Revised:	12/1/2008
							Reviewed:	6/17/2015
3300	Network Hardware Components: Routers, Hubs, Remote Access, CSU/DSU, NICS, Modems	• SNMP compliant • Modems: 56 Kbps v.92, International Telecommunications Union (ITU) data transmission standard • Ethernet NIC cards at 100Mbps/1Gps/10Gps • Wireless LAN installations must adhere to Enterprise IT Policy CIO-078 (Wireless LAN Policy).	I02.003.301	Network > Infrastructure > Hardware and Software	Specifically for Networks, Hardware and Software refers to many different kinds of devices and their firmware. These devices provide many things including routing, security, etc. The software included here is the firmware and/or Operating System (OS) associated with specific network devices.	Routers/Switches: • Avaya Networks Wireless Data Networking: • Avaya Networks Virtual Private Networks: • Avaya Networks • NetMotion Load Balancing: • F5 Networks	**Effective:**	7/1/1997
							Revised:	6/17/2015
							Reviewed:	6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3440	Video Conferencing	ITU-T Standards supported: • H.320, H.323, G.711, G.722, G.728, H.221, H.261, H.263, H.264, H.239, H.460, 18 & 19 Video Standards and Protocols, Algorithms and resolutions (pixels x lines): • ITU-T H.261 • QCIF • 4SIF • SVGA • UXGA • ITU-T H.263++ • SIF • FCIF • SXGA • 720p • ITU-T H.264 • CIF • VGA • WXGA/+ • 1080p • Frame rate: 5-30 frames per second Audio Resolution: • G.711, G.722, G.722.1, 64 bit & 128 bit MPEG4 AAC-LD, AAC-LD Stereo Monitor Outputs: • S-Video, Composite, HD15, HDMI, DVI-I, Component Camera Inputs: • S-Video, Composite, HD15, HDMI, DVI-I, Component • Video format: NTSC Broadcast Standards: • NTSC Audio Conferencing: • Omnidirectional pickup; push-to-talk (cardoid/super-cardoid) or omnidirectional, automatic microphone level adjustment; full duplex audio, full duplex, adaptive acoustic echo canceling Communications Protocols: • ITU-T H.221 Interfaces: • 10/100/1000 Full Duplex Ethernet Transmission Rates:	I02.004.405	Network > Transmission Type > Video Conferencing	Videoconferencing is the conduct of a videoconference (also known as a video conference or video teleconference) by a set of telecommunication technologies which allow two or more locations to communicate by simultaneous two-way video and audio transmissions. It has also been called 'visual collaboration' and is a type of groupware.	• Cisco TelePresence (formerly Tandberg) DX80 23"monitor desktop BFCP dual stream WIFI Android OS- 1080p cam Touch screen interface DX70 14"monitor desktop BFCP dual stream WIFI Android OS w/ 8mp cam Touch screen interface SX80 1080P@60 fps 4x or 20x camera. Avail w/ speaker tracking dual cameras and 10" touch screen control SX20 1080p with 3 camera options SX10 economy unit with 5x camera • Polycom RealPresence Group system 300/500 Small Room system HDX7000 720p with 12x Camera See also Category for Desktop Video Conferencing.	**Effective:** 10/21/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3440		• 384 Kbps						
3450	Desktop Video Conferencing	ITU-T Standards supported: • G.711, G.722, G.728, H221, H261, H263 Video Standards and Protocols, Algorithms and resolutions (pixels x lines): • T.120 standard for data collaboration Video Decoding: • up to 30 fps (frames per second) Video Encoding: • up to 22 fps Interfaces: • ISDN or IP (H.323 or SIP)	I02.004.405	Network > Transmission Type > Video Conferencing	Videoconferencing is the conduct of a videoconference (also known as a video conference or video teleconference) by a set of telecommunication technologies which allow two or more locations to communicate by simultaneous two-way video and audio transmissions. It has also been called 'visual collaboration' and is a type of groupware.	Cisco TelePresence (formerly Tandberg): • Movi Microsoft Lync - 2010 Version: Mainstream support slated to end 4/12/2016; Extended support slated to end 4/13/2021. Office Communications Server (OCS) 2007 Mainstream support slated to end 1/8/2013; Extended support slated to end 1/9/2018.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
3460	Web Video / Audio Conferencing / Collaboration		I02.004.404	Network > Transmission Type > Web Conferencing	Web conferencing refers to a service that allows conferencing events to be shared with remote locations. In general the service is made possible by Internet technologies, particularly on TCP/IP connections. The service allows real-time point-to-point communications as well as multicast communications from one sender to many receivers. It offers information of text-based messages, voice and video chat to be shared simultaneously, across geographically dispersed locations. Applications for web conferencing include meetings, training events, lectures, or short presentations from any computer.	• Citirx (GoToMeeting, GoToWebinar, GoToTraining) • Elluminate • iLinc • Microsoft Lync 2010 version: Mainstream support slated to end 4/12/2016; Extended support slated to end 4/13/2021. • Office Communications Server (OCS) 2007	**Effective:** 12/11/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3505	Network Services – Electronic Commerce and Payments	eMARS ePay (via the Link-to-Gov contract) is the approved enterprise electronic commerce facility for credit card payments via the internet. This full service facility includes account creation, merchant bank services, secure transactions, processing of credit card payments, authorization and settlement. Agency Contact Memo 9903-03 describes the pilot, contract and the e-commerce workflow.	A01.004.021	System > Financial Management > Accounts Receivable	Software that supports collections and receivables, including deposits, fund transfers, and receipts for sales or service.	All approved web browser products that support SSL encryption	**Effective:** 6/1/1999 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
3510	Network Services – Internet/ Intranet Web Server	World Wide Web Consortium (W3C) standards	I01.002.202	Platform > Operating System > Server – Midrange	A midrange computer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Midrange computers are almost universally known as servers to recognize that they often "serve" applications to end users at "client" computers, that they use a client/server computing model.	• Apache Tomcat • Microsoft Internet Information Server (version 6 or later) • WebSphere Web Server (both z/OS and UNIX)	**Effective:** 7/1/1997 **Revised:** 3/20/2009 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3511	Network – Internet/ Intranet - Web Browser	World Wide Web Consortium (W3C) standards	A02.032.402	Application Components > Web Access > Web Browser	Software used to locate, retrieve and also display content on the World Wide Web, including web pages, images, video and other files.	• Microsoft Internet Explorer: - IE 10 - IE 9 IE 9 and IE 10 are NOT compatible with Windows XP. - IE 8 - IE 7 Enterprise applications* HAVE been verified IE 10, IE9, IE 8 and IE 7 compliant. Agencies are advised to verify their own applications and tools sets work with IE 10, IE 9, IE 8 or IE 7 before recommending an upgrade for their staff. • Mozilla Firefox Only versions currently supported by Mozilla are authorized for new installation. • Google Chrome For maximum security, and to take advantage of advanced client software and web site functions and features, the latest browser release should be installed and used where feasible. * Enterprise Applications: eMARS, KBUD	**Effective:** 7/1/1997 **Revised:** 2/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3520	Network Services – Mainframe Access		A03.040.010	Interface > Application Interface > API	Source code based specification intended to be used as an interface by software components to communicate with each other. An application programming interface (API) may include specifications for routines, data structures, object classes, and variables (e.g., per Wikipedia).	DOS and Windows workstations: • BlueZone by Rocket Software • MochaSoft • IBM Personal Communications • IBM WebSphere Host On-Demand Mainframe File Transfer: • BlueZone by Rocket Software • MochaSoft NOTE: AttachMate is no longer supported.	**Effective:** **Revised:** **Reviewed:**	7/1/1997 6/17/2015 6/17/2015
3550	Network Services – Storage Area Networks		I01.005.503	Platform > Virtualization > Storage	Storage virtualization applies virtualization concepts to enable better functionality and more advanced features within the storage system. Storage systems use special hardware and software along with disk drives in order to provide very fast and reliable storage for computing and data processing.	• EMC • HP • IBM • Netapp	**Effective:** **Revised:** **Reviewed:**	12/20/1999 4/25/2013 6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
3600	Network Management	Simple Network Management Protocol – SNMP (Version 2 and above)	A01.012.080	System > Systems Management > Fault management	Software that detects, isolates, and corrects malfunctions in a telecommunications network and compensates for environmental changes. This includes maintaining and examining error logs, accepting and acting on error detection notifications, tracing and identifying faults, carrying out sequences of diagnostics tests, correcting faults, reporting error conditions, and localizing and tracing faults by examining and manipulating database information.	For UNIX and Windows: • Avaya Unified Communications Management (UCM) • BMC ProactiveNet Performance Management Solution • Cacti • HP Network Management System • Microsoft System Center Operations Manager (SCOM) • Nagios • What's Up Gold (Ipswitch)	**Effective:** 7/1/1997 **Revised:** 2/15/2012 **Reviewed:** 6/17/2015	
3650	Content Delivery Network	Support forward and reverse proxy of the following IP protocols: • HTTP • FTP over HTTP • FTP over TCP • FTPS (for mainframe file transfer) • HTTPS (secure transport) • NNTP • MMS • TSPard • ICAP Support for a variety of streaming media formats including MMS (Microsoft Windows Media) and RTSP (RealNetworks Media streaming) Authentication using Active Directory Flexibility that offers server-based or appliance solutions	I01.003.301	Platform > Communications Hardware > Network Interface Device	For the purposes of the IRM, a Network Interface Device is a broad term that includes devices that serve as a demarcation point between the carrier's local loop and the customer's on-premises wiring, where the data wires end and a customer's premise wiring starts, and network interface controllers (also known as a network interface card, network adapter, LAN adapter and by similar terms) which may be internal or external to a piece of computer hardware.	• Network Appliance • Microsoft Forefront Threat Management Gateway (formerly Microsoft Internet Security and Acceleration (ISA) Server) – replaces Microsoft Proxy Server. A software-based solution that runs on approved Microsoft server OS platforms only.	**Effective:** 10/1/2003 **Revised:** 1/19/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4025	Extensible Markup Language	Extensible Markup Language (XML) is an open standard for describing data from the World Wide Web Consortium (W3C) – a meta-language. XML is a simplified version of Standard Generalized Markup Language (SGML). It is used for defining data elements on a Web page and business-to-business documents. It uses a similar tag structure as HTML; however, whereas HTML defines how elements are displayed, XML defines what those elements contain. HTML uses predefined tags, but XML allows tags to be defined by the developer. There are four principle components that enable XML applications to process an XML document: the XML Document, Document Type Definitions (DTD) or Schemas, Processors and Parsers, and Style Sheets. XML provides a mechanism to label sets of data that can be shared between other systems. The importance of this feature is realized when sharing data between two systems that are operating with different software XML offers state agencies many potential benefits: provide for self-described transactions; enhance workflow and document management functions; interface with legacy systems; reiterate the use of object-based documents and support the implementation of e-government initiatives that must pass data. Approved Standard(s): - XML version 1.0 standard from the World Wide Web Consortium (W3C) - Legal XML standard	A03.040.014	Interface > Application Interface > XML	Extensible Markup Language (XML) defines a set of rules for encoding documents in a format that is both human-readable and machine-readable. It is defined in the XML 1.0 Specification produced by the World Wide Web Consortium (W3C), and several other related specifications, all gratis open standards.		**Effective:** 5/10/2000 **Revised:** 11/10/2000 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4030	Geographical Information Systems – Shapefile	The ESRI Shapefile is a popular geospatial vector data format for geographic information systems software. An ESRI shapefile consists of a main file, an index file, and a dBASE table. The main file is a direct access, variable-record-length file in which each record describes a shape with a list of its vertices. In the index file, each record contains the offset of the corresponding main file record from the beginning of the main file. The dBASE table contains feature attributes with one record per feature. The one-to-one relationship between geometry and attributes is based on record number. Attribute records in the dBASE file must be in the same order as records in the main file. Approved Standard(s): • Spatial Data Transfer Standard (SDTS), known FIPS 173 for exchange of data created by GIS - Federal Geographic Data Committee (FGDC) Metadata Standard, Sections 1 and 7	A02.024.380	Application Components > Geospatial Information > Cartography	Software that supports the creation of maps.	The ArcGIS suite of products which includes Desktop GIS, Server GIS and Mobile GIS and Online GIS components. Windows 7 Professional 64-bit is the recommended desktop platform as identified in the Kentucky Information Technology Standards Category for Geographic Information Systems (GIS) - Desktop.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4035	Geographical Information Systems – Geodatabases	The geodatabase is a data storage format that is utilized within the ArcGIS suite of software. There are two primary types of geodatabases: file-based and multi-user (enterprise). A file-based geodatabase is stored as binary in a GDB directory structure and can be created using any of the ArcGIS products: ArcView, ArcEditor or ArcGIS Advanced. A multi-user geodatabase is stored in a more powerful relational database management system (RDBMS) like Oracle, Informix, SQL Server or DB2 and must be interfaced with ArcSDE software. Data from a multi-user geodatabase can be read using any of the ArcGIS products, but can only be edited using ArcEditor or ArcGIS Advanced.	A02.024.380	Application Components > Geospatial Information > Cartography	Software that supports the creation of maps.	ArcGIS suite of products - ArcView, ArcEditor or ArcGIS Advanced. ArcSDE.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4050	Recordkeeping - General	A public record is recorded information made or received in conjunction with official agency business that is kept as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the government. Statutory definition: "Public record or record" means all books, papers, maps, photographs, cards, tapes, disks, diskettes, recordings, and other documentary materials, regardless of physical form or characteristics, which are prepared, owned, used, in the possession of or retained by a public agency. (KRS 171.410, PDF) Approved Standard(s): • Department of Defense (DoD) standard 5015.2 defines baseline records management requirements for electronic systems, based on operational, legislative and legal needs of Federal agencies. This standard has been endorsed by the National Archives and Records Administration. • Records schedules approved by the State Archives and Records Commission reflect known operational, legal, audit, and historical recordkeeping requirements. Agencies must maintain up-to-date and accurate schedules and create and manage records within their framework, in order to fulfill this standard. • Kentucky IT Standards for Electronic Documents – Final Version for Distribution and High Volume Scanners – Digital Imaging specify use of PDF and CCITT III and IV file formats, for non-alterable electronic documents and image files respectively. Other recommended or de facto standard file formats are described in the Kentucky Department for Libraries and Archives' online publication, Electronic Records Management Guidelines - File Formats	B10.804.345	General Government > General property and records management > Management of Government Records	Management of Government Records involves the management and stewardship of a type of information by the government in order to facilitate communication and information archival. This classification and taxonomic processes that links logical data and information sets.	Products must be listed in DoD 5015.2 plus the supporting technology also must be listed within the Kentucky Information Technology Standards or a KITS Exception is required.	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
4055	Preservation of Long-term Records	The Preservation of Long-term Records Table represents the digital formats that KDLA has recognized and is encouraging agencies to use when transferring records to the archives. These formats may also be used by agencies when maintaining records with long-term retention (retention period of more than 20 years) in-house. The formats, and corresponding confidence levels, represent KDLA's preferences for long-term preservation. Agencies are free to use other formats (including those not listed) for active business use as long as they meet with state approved standards and architecture. However, systems employed by agencies should support these formats or be able to export records to these formats. The risk level levels identified in the table below are ranked from low (most conducive for long-term preservation) to high (least conducive for long-term preservation.) The risk levels are determined by a combination of sustainability factors including: 1. Documentation. Degree to which complete specifications and tools for validating technical integrity exist and are accessible to those creating and sustaining digital content. Non-proprietary, open standards are usually more fully documented and more likely to be supported by tools for validation than proprietary formats. However, what is most significant for this sustainability factor is not approval by a recognized standards body, but the existence of complete documentation, preferably subject to external expert evaluation. 2. Adoption. Degree to which the format is already used by the primary creators, disseminators, or users of information resources. This includes use as a master format, for delivery to	B10.804.345	General Government > General property and records management > Management of Government Records	Management of Government Records involves the management and stewardship of a type of information by the government in order to facilitate communication and information archival. This classification and taxonomic processes that links logical data and information sets.		**Effective:** 5/19/2010 **Revised:** **Reviewed:** 6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
4055		end users, and as a means of interchange between systems. If a format is widely adopted, it is less likely to become obsolete rapidly, and tools for migration and emulation are more likely to emerge. 3. Compression. Many digital formats used for disseminating content employ compression. However, for practical reasons, some digital audio, images, and video may never be stored in an uncompressed form, even when created. Content should be compressed using publicly disclosed and widely adopted algorithms that are either lossless or have a degree of loss compression that is acceptable to the creator, publisher, or primary user as a master version. 4. External Dependencies. Degree to which a particular format depends on particular hardware, operating system, or software for rendering or use and the predicted complexity of dealing with those dependencies in future technical environments. 5. Technical Protection Mechanisms. To preserve digital content and provide service to users and designated communities decades hence, KDLA must be able to replicate the content on new media, migrate and normalize it in the face of changing technology, and disseminate it to users at a resolution consistent with network bandwidth constraints. Content for which KDLA takes long-term responsibility must not be protected by technical mechanisms such as encryption, implemented in ways that prevent custodians from taking appropriate steps to preserve the digital content and make it accessible to future generations. These controls may be necessary for business reasons while the data is in active use in the agency but should be removed upon transfer to the archive.					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
4055		The low and medium risk levels represent the formats that KDLA feels are the most sustainable over time. Agencies should avoid using formats listed in high risk column, or make sure that the records in question can be converted to the formats in the Medium and/or Low risk columns. View the Preservation of Long-term Records Table.					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4060	Recordkeeping – Electronic Mail	Electronic mail (email) messages are any communication supported by email systems for the conduct of official agency business internally, between other state, local, and federal agencies, and with constituents, voters, vendors, clients, citizens, and others. This definition applies equally to the contents of the communication, the transactional information associated with each message, and any attachments to the body of the message. The email environment in Kentucky state government has a current transaction volume that exceeds eighty million messages a month. This figure dramatically illustrates the extent of agency use and reliance on email services to conduct state business. Two existing Enterprise policies, (1) Status of Electronic Mail as a Public Record, and (2) Internet and Electronic Mail Acceptable Use Policy, CIO-060, have emphasized that electronic mail is statutorily defined as a public record and set broad parameters for the management and acceptable use of email in the executive branch of state government. This standard clarifies agency responsibilities. Approved Standard(s): • KRS sections 061.870 (Open Records) and 171.410 (State Archives and Records) define "public record" to mean all books, papers, maps, photographs, cards, tapes, disks, diskettes, records, and other documentation / documentary materials, regardless of physical form or characteristics, which are prepared, owned, used, in the possession of, or retained by a public agency. Being public record under these terms, electronic mail must be managed to provide appropriate, reliable, and cost-effective evidence of the business	B10.804.345	General Government > General property and records management > Management of Government Records	Management of Government Records involves the management and stewardship of a type of information by the government in order to facilitate communication and information archival. This classification and taxonomic processes that links logical data and information sets.	See standard for Electronic Mail, Messaging and Collaboration	**Effective:** **Revised:** **Reviewed:**	3/8/2001 6/17/2015 6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
4060		activities it supports, relates to, or documents. Its integrity, completeness, retrievability, public accessibility, and retention all should respond to agency or Enterprise business requirements. • Agencies establish recordkeeping rules* that are appropriate to the business functions they normally perform. These rules reflect best recordkeeping practices associated with the specific business processes agencies are engaged in, as well as any explicit legal, audit, or archival requirements that have been established. Agencies must apply these recordkeeping rules to the administration of electronic mail as it relates to the same business functions. *The Kentucky Department for Libraries and Archives and the State Archives and Records Commission have statutory authority to establish records management requirements for public agencies of the Commonwealth, and agency recordkeeping practice should conform to standards, schedules, or guidelines developed by them. The following general requirements must be met by agencies in managing email: • The integrity, reliability, and authenticity of email messages must be protected through compliance with all security and data management requirements established in the Enterprise Architecture and Standards. • Per the acceptable use policy referenced above, agencies must instruct employees and take steps to ensure that non-business related email messages are regularly deleted from email stores (inboxes and personal folders). Transitory messages, which are defined as messages that are for informational and reference purposes only and do not set policy, establish guidelines or procedures, certify a					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
4060		transaction, or become a receipt, must also be routinely disposed of. • Retention periods for email messages vary according to the functions they are associated with. It is the responsibility of the agency to codify retention practices through development of records schedules in cooperation with the Kentucky Department for Libraries and Archives. Retention requirements cannot be met through routine agency backups, and agency staff must be made fully aware of this and the appropriate schedules that must be created and adhered to. • EAS Appendix G, Guidelines for Managing E-Mail in Kentucky State Government, promulgated by the Department for Libraries and Archives, provides agencies with further guidance on the implementation of this standard.					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4065	Data Governance – Data Stewardship	The fundamental building block of the Enterprise Architecture and Standards is data – it is a critical state resource and must be managed as such. Data must be thought of as a strategic enterprise resource and not as belonging exclusively to one program, agency or individual. A statewide shift in mindset must be made away from local data ownership and towards local data stewardship. A steward is an individual who manages something on behalf of someone else. Accordingly, the role of a Data Steward is to manage the data of an agency functional/program area on behalf of the Commonwealth at large. To assure that maximum benefit is derived from the sharing, integration and utilization of data for both program-level tactical applications and multi-agency strategic predictive planning, decisions regarding data must also be made at the enterprise level. The Division of Enterprise Architecture and the Information Technology Standards Committee (ITSC) are the appropriate venues for those decisions to be made. Approved Standard(s): Executive branch agencies are responsible for assigning data stewardship responsibilities to designated staff, to facilitate the proper management of data as a strategic resource for the enterprise. This responsibility is assumed to encompass the standardization and appropriate sharing and integration of data resources, consistent with state and Federal laws and the vision of the Kentucky Enterprise Data Architecture.	B10.811.KY001	General Government > Information sharing > Data Governance	Refers to the overall management of the availability, usability, integrity, and security of the data employed in an enterprise.	IBM InfoSphere Information Governance Catalog IBM Glossary Anywhere	**Effective:** 1/1/2008 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4070	Common Data Definitions	A core set of common data definitions, formats, type, and size and code values for enterprise data elements. A unique identifier for both individuals and organizations that associates data to a single entity is a critical element of the data definition. Approved Standard(s): • The Enterprise Common Data Definitions related to individual and organizational identity only, are fully described in the documentation on the Enterprise Common Data Model Framework. • The enterprise policy directing the use of Enterprise Common Data Definitions by state agencies and incorporating the recommendations into the Enterprise Standards by reference: Commonwealth Office of Technology Policy Directive – "Policy Statement Relating to Enterprise Data Standards" (adopted Dec 13, 2007). See https://gotsource.ky.gov/docushare/dsweb/Get/Document-115912/	B10.811.604	General Government > Information sharing > Meta Data Management	Support the maintenance and administration of data that describes data.	IBM InfoSphere Information Governance Catalog IBM Glossary Anywhere CA - ERwin IBM InfoSphere Data Architect	**Effective:** 1/1/2008 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4080	Data Classification Standard	This standard establishes the criteria for classifying data and information into three categories: Non-Sensitive, Sensitive and Confidential. This classification matrix in no way supersedes the Open Records Act requirements of State Government (KRS 61.870 to 61.884). Classification is important because it determines the level of security to be applied to the data, any application that processes the data, and the environment which houses/stores the data. As would be expected, sensitive and confidential data require more stringent security while non-sensitive requires very little security (only controls over the integrity and availability of the data may be necessary). All Commonwealth data must be appropriately reviewed to determine its classification. This classification will be used for, but is not limited to, determining limitations on the use, protection and storage of the data. If data is interdependent with other data that is classified with a higher level of sensitivity, the classification that requires the most stringent controls should be used.	S01.001.001	Purpose > Regulatory Conditions > Executive Branch Directives	Executive Orders, Memoranda, security directives regarding classification and protection of federal information or other security goals. See FIPS 200, NIST SP 800-53, NIST SP 800-53A, NIST SP 800-37, and CNSSI-4009.		**Effective:** 9/16/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4090	Data Integration	Data integration is the process of combining data residing at different sources to provide a unified view of these data. Data integration can be classified in four different types of integration based on the characteristics of the data movement. • Enterprise Application Integration (EAI) – Usually associated with use between two existing systems where at least one is a transaction processing system. Characteristics of EAI: Transaction based data ; Data is usually structured (file layouts) ; Messaging transport is used (MSMQ, MQ, File, etc) ; Low transformation of the data ; Translation of data is usually performed ; Usually associated with Process Integration ; Commonly event driven and/or real time processing. Common architectures: Web Services (Point to Point)/Service Interface (IMS/CICS) ; IBM MQ/MSMQ ; ESB (IBM Message Broker, MS BizTalk) ; Remote Procedure Call (RPC) • Extract-Transform-Load (ETL) – Used to communicate between two or more systems where the systems can be a transaction processing system, management information system or decision support system. Characteristics of ETL: Record based data ; Usually derived data ; High volume ; Movement of data from store to store ; Structured or Semi-structured data ; Usually associated with Process Integration ; Batch based (right time) Common architectures: ETL Tools (SAS, IBM DataStage/QualityStage) ; Custom extract programs (batch) ; Ad-Hoc query tools Microsoft Excel, etc) • Data Replication – Used to copy data from one data store to another for duplication of data from one system to another. Characteristics of Data Replication:	B10.811.601	General Government > Information sharing > Data Exchange	Supports the interchange of information between multiple systems and applications; includes verification that transmitted data was received unaltered.	IBM InfoSphere FastTrack IBM InfoSphere DataStage IBM InfoSphere QualityStage IBM InfoSphere Information Services Director IBM InfoSphere Federation Server	**Effective:** 9/16/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
4090		Data store to data store copy ; Structured data ; Low transformation of the data ; Used when high availability is necessary ; Usually associated with Analytical Systems Common architectures: Database vendor tools (IBM ReplicationServer) ; Compuware File-Aid (IMS, DB2, etc) ; Third party database tools • Federation – Used to facilitate access to data while leaving the data in place within the source system. Characteristics of Federation: Query based ; Usually multiple data sources ; Structured/Semi-structured data ; Moderate transformation ; Wrappers are utilized to provide consistency of data ; Real time – need the most current data ; Usually associated with Analytical Systems ; Medium to high volume. Common architectures: IBM Classic Federation (z/os data stores – IMS, VSAM, QSAM, etc) ; IBM Federate Server (distributed data stores) View more information related to this standard at https://gotsource.ky.gov/docushare/ds web/Get/Document-301107/					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
4350	Electronic Commerce – Electronic Data Interchange (EDI)	Electronic data interchange (EDI) is the secure electronic communication of business transactions, such as purchase orders, confirmations, invoices, and other data between organizations. EDI may be used to submit data to a state agency in a standard, prescribed format, with translation software required to complete the communication. Value added networks (VANs) act as third parties to provide EDI services that enable organizations with different equipment to connect. The EDI format chosen must provide proper security controls to protect the Confidentiality and integrity of the data during transmission. The two approved standards are: ANSI ASC X12 UN/EDIFACT The ANSI ASC X12 EDI standard defines the data structure and content for business transactions transmitted between computer applications. The United Nations Rules for Electronic Data Interchange For Administration, Commerce and Transport (UN/EDIFACT) is a set of internationally agreed upon standards, directories and guidelines for the electronic interchange of structured data that relate, in particular, to trade in goods and services.	B10.811.601	General Government > Information sharing > Data Exchange	Supports the interchange of information between multiple systems and applications; includes verification that transmitted data was received unaltered.		**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5010	Intrusion Detection and Prevention	Products must support approved Enterprise standards in the following categories: • Operating systems—specific Unix operating systems (OSs), MS Windows, Linux • Network topologies—Ethernet, T1/E1 • Switched networks • Protocols—TCP/IP, UDP • Applications—FTP, HTTP, Telnet • Firewalls All tools within this category have the ability to appear to network defense mechanisms as reconnaissance or attack activity. To ensure that the scanning activities are effective, able to complete uninterrupted, and do not raise unnecessary alarm all provisions in CIO-082 Critical Systems Vulnerability Assessments must apply.	A01.011.073	System > Security Management > Intrusion Detection	Hardware or software products that gather and analyze information from various areas within a computer or a network to identify possible security breaches, which include both intrusions (attacks from outside the organizations) and misuse (attacks from within the organizations.)	Top Layer Products: • IBM ISS Proventia • McAfee Host IPS (included in McAfee Endpoint Protection – Advanced Suite) • McAfee Network Security Manager • McAfee Network Security Platform • Snort-SourceFiret • Suricata • HP TippingPoint Internet Security Systems Products: • RealSecure Server Sensor • RealSecure Site Protector • Retina Network Security Scanner • Symantec Security Monitoring Services • Symantec DeepSight	**Effective:** 6/1/2003 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5100	Encryption	IETF X.509 Public Key Infrastructure (PKI latest version for digital certificates) The purpose of this standard is to provide Commonwealth of Kentucky agencies guidance on the use of encryption to protect Commonwealth information resources that contain, process, or transmit data classified as sensitive or confidential. This standard applies to encryption controls for data that is at rest (including portable devices and removable media) and data in motion (transmission security). This standard is compatible with, but does not supersede, federal encryption standards. Agencies should refer to the data classifications defined in Enterprise Standard 4080 – Data Classification. https://gotsource.ky.gov/docushare/dsweb/Get/Document-301107/. Once the data has been classified, the agency must determine the proper encryption implementation(s) to achieve the desired level of protection. Encryption Strength - Based on the data classification described above, Commonwealth of Kentucky agencies will use Federal Information Processing Standard (FIPS) 140-2 approved algorithms as outlined in National Institute of Standards and Technology (NIST) 800-57, part 3, Revision 1 for encrypting sensitive and confidential data. Wireless Technologies (including Bluetooth)- COT recommends that organizations with existing legacy IEEE 802.11 implementations develop and implement migration strategies to move to IEEE 802.11i-based security because of its superior security capabilities. IEEE 802.11i addresses the security flaws in the original IEEE 802.11 standard with built-in features	A02.029.342	Application Components > Security Controls > Encryption	Software to convert plaintext to ciphertext through the use of a cryptographic algorithm.	The Entrust suite of PKI enabled products	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
5100		providing robust wireless communications security, including support for FIPS 140-2 validated cryptographic algorithms. In addition, it is necessary to employ higher level cryptographic protocols and applications such as Secure Shell (SSH), Transport Layer Security (TLS) or Internet Protocol Security (IPSec) with FIPS 140-2 validated cryptographic modules and associate algorithms to protect sensitive or confidential data in transit. Encryption Key Management Standard - Proper key management is necessary for ensuring that encrypted data is secure and accessible when needed. Procedures should be created, or automated mechanisms utilized, for the management of encryption keys that encompasses the following phases of the Encryption Key Management Life Cycle: • Key creation • Key backup • Key deployment • Key Rotation • Emergency and routine revocation of keying material • Auditing of keying materials and related records • Key recovery • Destruction of revoked or expired keys					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5110	Endpoint Storage Device Encryption	Encryption is required by CIO-092 for any portable storage device when it will contain data defined as Sensitive or above according to the Kentucky Data Classification Matrix.	A02.029.342	Application Components > Security Controls > Encryption	Software to convert plaintext to ciphertext through the use of a cryptographic algorithm.	McAfee Endpoint Protection Bitlocker for Microsoft Surface Pro Note: we would like to prevent any new installs of Checkpoint Pointsec	**Effective:** 1/20/2010 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
5120	Encrypted Flash Drive	An encrypted flash drive is required by CIO-092 when it will contain data defined as sensitive or confidential according to the Kentucky Data Classification Matrix. The encryption will use Federal Information Processing Standard (FIPS) 140-2 approved algorithms as outlined in National Institute of Standards and Technology (NIST) 800-57, part 3, Revision 1 for encrypting sensitive and confidential data.	I01.001.107	Platform > Hardware > Removable Storage Media	Removable storage media is any type of storage device that can be removed from a computer while the system is running.	Any product that utilizes (FIPS) 140-2 approved algorithms as outlined in National Institute of Standards and Technology (NIST) 800-57, part 3, Revision 1 for encrypting sensitive and confidential data.	**Effective:** 2/4/2010 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5505	Sanitization and Disposal of Information Technology Equipment and Electronic Media	The recognized authority for Sanitization and Disposal standards are the National Institute of Standards and Technology referenced in their documents: • NIST SP 800-53 v. 4: Media Protection • NIST SP 800-88 v. 1: Guidelines for Media Sanitization • NIST SP 800-36: Guide to Selecting Information Technology Security Products, Section 5.9 And U.S. Department of Defense Standard: DoD 5220.22-M: National Industrial Security Program Operating Manual (NISPOM) Archiving Records: Any IT devices (servers, storage, clients), network components, operating system or application software, or storage media containing public records as defined by KRS 61.870(2) and 171.410 shall have the final disposition of those records established with the Kentucky Department for Libraries and Archives prior to disposal through the Division of Surplus Property (Finance) or transfer to other agencies for re-use. CIO-092, Media Protection Policy: This policy ensures proper provisions are in place to protect information stored on media, both digital and non-digital, throughout the media's useful life until its sanitization or destruction. Physical Destruction: Physical destruction is an acceptable option for devices and portable media that are permanently being disposed. On storage devices or media that have been rendered inoperable because of failure, physical destruction is required. See Table 5-1: Sanitization Methods (Destroy Method) for more details on this option.	S03.002.002	Controls > Control Categories > Operational	The security controls (i.e., safeguards or countermeasures) for an information system that are primarily implemented and executed by people, as opposed to executed by systems. See FIPS 200.	Approved products and mechanisms for rendering data inaccessible depend on the type of media being used and the disposition of the device or media. Further discussion is provided under Technical and Implementation Considerations. Recommended Products: Disks: • WipeDrive • Active@KillDisk Files: • Darik's Boot and Nuke (DBAN) • SecureClean (included with WipeDrive now) Degausser Equipment: • HD-1T Chamber Degausser (Data Security, Inc.) Physical Destruction: • DIsk/Tape Shredder	**Effective:** 2/14/2003 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5515	Secure Transport	Transport Layer Security (TLS)1.2 or greater encryption is required if data needs to be secured during transmission over inherently unsecure protocols such as FTP, HTTP, SMTP, NNTP, or XMPP (unless the data is encrypted prior to transmission). Secure Shell (SSH) is a Unix/Linux-based command interface and protocol for securely accessing a remote computer. This protocol can be used for remote access as well as secure data transport through SFTP and SCP. All electronic payments (credit card, EFT, etc) and the collection of personally identifiable information must be secured during transport (see Category for Network Services - Electronic Commerce and Payments). Strong encryption (256-bit or greater) is recommended and may be required for certain applications, particularly personal and health-related information as prescribed in federal law or required regulatory compliance. Examples include, but are not limited to PCI (Payment Card Industry) compliance, FISMA (Federal Information Security Management Act), HIPAA (Health Insurance Portability and Accountability Act), FERPA (Family Educational Rights and Privacy Act) and IRS Publication 1075. WS (Web Service) security protocols should be used whenever web services are designed and implemented. To authenticate and secure the web server, a server certificate (digital ID), available from Entrust, must be assigned to the web server. This includes secure servers operated under contract, although any server certificate software may be used in those instances.	S03.002.003	Controls > Control Categories > Technical	The security controls (i.e., safeguards or countermeasures) for an information system that are primarily implemented and executed by the information system through mechanisms contained in the hardware, software, or firmware components of the system. See FIPS 200.	Entrust.net Transport Layer Security (TLS 1.2) server certificates All web browser approved products (Category 3511) support TLS 1.2 All web server approved products (Category 3510) support TLS 1.2 Secure Shell (SSH), Secure Shell v2 (SSH2)	**Effective:** 6/1/1999 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5530	Virus Scanning	• All desktops, laptops and servers shall have antivirus/malware protection installed • All systems shall undergo at a minimum a monthly full system scan for viruses and malware • Where possible, portable devices shall also have antivirus protection • Antivrus/anti-malware shall be centrally managed with ongoing updates and reports • End users shall not be able to disable the antvirus/anti-malware software on their systems • Scans should be scheduled to occur automatically	A02.029.343	Application Components > Security Controls > Virus Protection	Software used to prevent, detect, and remove self-replicating programs that run and spread by modifying other programs or files.	Windows Server OS: • McAfee Endpoint Protection – Advanced Suite Windows Desktop OS: • McAfee Total Protection for Secure Business Linux OS: • McAfee VirusScan Enterprise for Linux Microsoft Exchange: • McAfee GroupShield for Microsoft Exchange (included in McAfee Security for Email Servers and Microsoft Sharepoint: • McAfee Security for Microsoft Sharepoint NetWare: • McAfee Endpoint Protection – Advanced Suite	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
5545	Spam Filtering	Support for all approved hardware platforms, operating systems software and applications. Ability to detect an unsolicited or inappropriate email and deliver to a separate inbox for review before delivery to the addressee.	A02.029.343	Application Components > Security Controls > Virus Protection	Software used to prevent, detect, and remove self-replicating programs that run and spread by modifying other programs or files.	• McAfee Email Gateway • McAfee Total Protection for Internet Gateways	**Effective:** 8/21/2008 **Revised:** 1/19/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5550	Web Filtering	• Must be able to analyze domain name • Must be able to break down and analyze web traffic to accurately pinpoint portions of a web page which should not be allowed into the internal network • Must be able to block based on contet • Must be able to be centrally managed	A02.029.343	Application Components > Security Controls > Virus Protection	Software used to prevent, detect, and remove self-replicating programs that run and spread by modifying other programs or files.	• CyBlock (Wavecrest) • McAfee Secure Web Gateway	**Effective:** 1/19/2011 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5700	Firewall	• International Computer Security Association (ICSA) - ICSA Labs® Certification for firewall products • Firewall Product Developers Consortium (FWPD) Product Certification Criteria • Internet Protocol Security Protocol Working Group (IPsec), part of the Internet Engineering Task Force (IETF) • National Institute of Standards and Technology (NIST) Firewall Protection Profile • Support all Internet Protocol (IP) stacks • Approved application servers and operating system (OS) • Integration with internetworking hardware and software from Nortel Networks Based on the enterprise policy CIO-076, COT shall manage all enterprise and intranet firewall and VPN services that utilize the KIH infrastructure. Agencies may manage agency-level Tier II firewall services under certain stipulations and with COT network visibility to the firewall. It is imperative that network services for all agencies within the KIH are protected and that the integrity of the KIH is protected to insure that enterprise services are not compromised. The administration of firewalls and virtual private networks (VPN) is a critical component in securing the KIH infrastructure and computing systems. • Internet and Extranet (business relationships) VPN connections must be managed to maintain enterprise security and reduce security risks. For this reason, COT shall be the approving authority for access to KIH computing resources. Agencies using the Internet to communicate and share data must use the COT-managed VPN service. • Intranet VPN connections shall be managed by COT to maintain enterprise	S03.002.003	Controls > Control Categories > Technical	The security controls (i.e., safeguards or countermeasures) for an information system that are primarily implemented and executed by the information system through mechanisms contained in the hardware, software, or firmware components of the system. See FIPS 200.	Check Point is the approved product standard for Tier I firewall services. Tier I classification includes all services and/or systems that are considered an enterprise resource. Enterprise resources should be located at the Commonwealth's Data Center (CDC) in order to maximize security benefits and network efficiency. Enterprise resources located at CDC benefit from additional security technologies in place there. Avaya VPN Router firewall product is the enterprise standard for Tier II firewall services. Tier II classification includes all services and/or systems that are agency-specific but available for the enterprise. Agency-specific applications and services would be suitable for Tier II firewall services. Tier II firewall services may not be interoperable with other enterprise security platforms. NOTE: Agencies are encouraged to review the COT security offering for firewall services.	**Effective:** 7/1/1997 **Revised:** 1/19/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
5700		security and network routing efficiencies. Agencies wanting to create Intranet VPN's must use COT VPN approved services.						
5710	Desktop / Laptop Firewall Software	• All state-owned laptop computers must have desktop/laptop firewall software installed on them. • All VPN-connected and dial-up connected workstations that remotely connect to the state's network must have desktop/laptop firewall software installed on them.	S03.002.003	Controls > Control Categories > Technical	The security controls (i.e., safeguards or countermeasures) for an information system that are primarily implemented and executed by the information system through mechanisms contained in the hardware, software, or firmware components of the system. See FIPS 200.	The current approved and supported enterprise standards for individual computers connecting to the Commonwealth's Intranet are: • McAfee HIPS • Microsoft Windows Firewall • Symantec - Norton Personal Firewall • Zone Labs: Zone Alarm (free for home use); Zone Alarm Plus; Zone Alarm Pro; Zone Labs' enterprise solution includes Zone Labs Integrity, Zone Labs Integrity Desktop, and Integrity Desktop Manager (simple deployment tool).	**Effective:** 12/5/2003 **Revised:** 1/19/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
6100	Backup and Recovery	Compatible with approved server and desktop workstation operating systems, network protocols, network topology and database management software.	A02.021.220	Application Components > Data Management > Data Backup and Recovery	Software that creates copies of data which may be used to restore the original after a data loss event or to restore and stabilize data sets to a consistent, desired state.	• Computer Associates BrightStor (formerly ARCserve) Enterprise and Workgroup editions (includes software products formerly available as ARCserve, ARCserveIT) • EMC Avamar • IBM Tivoli Storage Manager (TSM) - shared services network backup/restore services offered by COT • Microsoft Data Protection Manager (DPM) • Simpana (Commvault) • Symantec - Veritas Backup Exec and NetBackup - workgroup editions	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
6540	Inventory and Distribution	Compatible with existing network protocols, server OS and desktop computer OS.	A01.012.083	System > Systems Management > Software Distribution	Software that supports distribution of software, propagation, installation and upgrade of written computer programs, applications and components.	• System Center Configuration Manager	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
7005	Naming Conventions	While there is no current standardized naming convention, please see the suggested "Best Practice" statement on pages 11 and 12 of the document at https://gotsource.ky.gov/docushare/dsweb/Get/Document-301114/	B10.811.339	General Government > Information sharing > Information Mapping / Taxonomy / Categorization	Information Mapping/ Taxonomy/ Categorization defines the set of capabilities to support the creation and maintenance of relationships between data entities, naming standards and categorization and allow classification of data and information into specific layers or types to support an organization.		**Effective:** 5/10/1999 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7010	Internet Domain Naming Conventions	Internet Engineering Task Force (IETF) Informational RFC 2146 41 CFR Part 102-173 Jurisdiction of the Internet .GOV domain is available to federal, state and local governments as well as Native Sovereign Nations (NSNs). As required by the U.S. General Services Administration (GSA) for second-level domain registration, states "must register the full state name or clearly indicate the State postal code within the name." The Commonwealth Office of Technology is the authoritative source for registration of the second-, third-, and fourth-level .GOV domain for state agencies. (Domain Name System (DNS) Request form) The suffix .kentucky.gov is reserved for use only on the state home page and certain directly associated pages. Both .ky.gov and .state.ky.us are second-level domains that are reserved and approved for Kentucky state government. (Note that name .state.ky.us is scheduled for obsolescence in use for public display based on sunset dates.) At the third level, agencies are permitted to use agency names or program names. If multiple domain names are created, one of the names should be considered primary, used to promote the site and any others should redirect to that name. The following naming conventions are approved: agency_name or program name.ky.gov Examples: Transportation.ky.gov, KYTC.ky.gov, KYTransportation.ky.gov Examples: taxamnesty.revenue.ky.gov, taxamnesty.ky.gov, 511.ky.gov The agency name can be a cabinet, department, or division name, in whatever format the agency chooses - acronym, full name, natural words, etc.	B10.811.339	General Government > Information sharing > Information Mapping / Taxonomy / Categorization	Information Mapping/ Taxonomy/ Categorization defines the set of capabilities to support the creation and maintenance of relationships between data entities, naming standards and categorization and allow classification of data and information into specific layers or types to support an organization.		**Effective:** 2/14/2003 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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7010		Agency names can include ky or k as a prefix, although this redundant usage is not recommended. For additional information related to this standard, please see the suggested "Best Practice" statement on page 13 of the document at https://gotsource.ky.gov/docushare/ds web/Get/Document-301114/						
7015	Electronic Mail Address Naming Convention	For state government e-mail accounts, the following e-mail naming convention is approved for primary addresses: firstname.lastname@ky.gov distribution_listname@ky.gov Agency distribution listings which allow a search on the Global Address Book to provide a listing of all persons within that agency. Formats: AgencyName@ky.gov, Agency.distribution_name@ky.gov As the state's domain name registrar and shared services provider of enterprise e-mail, COT will manage and authorize the assignment of ky.gov e-mail addressing. To maintain e-mail domain name integrity, eligibility for ky.gov-based e-mail addresses is limited to qualified state government organizations. Non-unique name combinations will be handled through combinations of initials that render names unique and distinguishable.	B10.813.659	General Government > Support delivery of state services > Email	Defines the set of capabilities to support the transmission of communications over a network. Includes instant messaging	• Microsoft Exchange Server • Microsoft Outlook Client	**Effective:** 10/1/2003 **Revised:** 1/20/2010 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7020	Internet / World Wide Web Design and Publishing	Web technologies considered current standards include most current version per W3C: • Hypertext Markup Language - HTML • Extensible Hypertext Markup Language - XHTML • Cascading Style Sheet - CSS • Document Object Model - DOM • Synchronized Multimedia Integration Language - SMIL • JavaScript & Dynamic HTML – DHTML. Web Page Construction: The Enterprise Web Design Template and supporting style sheets are provided as a starting point for use in creation of all externally-presented entity pages (exclusive of online applications), and for the replacement of existing pages. Template and supporting style sheets may be found at KY Enterprise Web Design Template. Note: The use of other technologies (e.g., Java, Flash) and other document formats (e.g., Adobe Acrobat PDF, Microsoft Word) is permissible when used with the above- referenced design template. External Links: Links to Internet resources external to State Government are encouraged, where appropriate. COT Agency Contact Memo 9805-05 - Policy, Procedures and Guidelines for Approving External Internet Links. GSA guidelines relating to link changes that direct .gov site users to non-.gov sites require all such links to include explicit notification of such re-direction, either within text accompanying the links or as a splash page. Banner Ads: The placement of banner ads and Web site advertising are currently prohibited, as communicated in the CIO policy directive, May 22, 2000, "Moratorium on Banner Advertising on State Web sites." In this memorandum it is noted that while	B10.813.326	General Government > Support delivery of state services > IT System Development / Integration Support	IT System Development / Integration Support includes the software services enabling elements of distributed business applications to interoperate and the software development necessary to facilitate such integration. These elements can share function, content, and communications across heterogeneous computing environments.	Must comply with KY Enterprise Web Design Template. Must comply with approved Web Browser standards.	**Effective:** 5/2/2002 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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7020		opportunities may appear very desirable on the surface, there are complex policy issues associated with accepting vendor-sponsored web advertising. GSA guidelines referenced immediately above also forbid such advertising. Metadata: Specific tags are required to meet accessibility requirements, and these are to be defined in a subsequent standard (702x). Government Information Locator Services (GILS) metatags have been adopted by the Kentucky Department for Libraries and Archives GILS program, although agency participation in this program is not currently required.					

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7025	Accessibility for Internet / World Wide Web Design and Publishing	The Commonwealth of Kentucky incorporates into its Web Accessibility Standard (WAS) all applicable federal and state laws, including Section 508 of the Federal Rehabilitation Act (1986) (see http://www.access-board.gov/508.htm and http://www.section508.gov), and the World Wide Web Consortium (W3C), Web Accessibility Initiative (WAI), Web Content Accessibility Guidelines (WCAG) 1.0, Conformance Level Double-A. New web pages and major updates to existing web pages will abide by these standards and guidelines effective immediately upon the adoption of the standard. All existing web pages produced by Commonwealth of Kentucky agencies should already meet these standards, since the compliance level has not changed since 2001. The standard applies to all web pages created by Commonwealth of Kentucky agencies. In addition, Kentucky is taking the following steps to ensure accessibility of web pages provided by third-party developers: • informing third-party developers of Kentucky's Web Accessibility Standard; • providing information and resources on implementing Kentucky's Web Accessibility Standard; • monitoring and providing feedback on inaccessible third-party web pages created for the Commonwealth of Kentucky; • seeking alternative third-party developers where the original developers continue to produce inaccessible web pages. All Commonwealth of Kentucky Government web pages will contain a link to this policy. This policy will be reviewed and updated as changes occur in the laws, standards or technologies.	A02.022.245	Application Components > Development Environment and Tools > Validation Tools	Software tools that check web pages for accessibility and syntactical correctness of code.	KY Enterprise Web Design Template For design products, review the standard on recommended authoring tools, Enterprise Standard for HTML Authoring and Web Publishing. Recommended graphics tools are provided in Standard for Advanced Drawing – Drawing / Illustration / Diagramming. For automatic accessibility validators, no tool can validate all the requirements necessary. There are a number of subjective requirements that a tool cannot test. For example, Section 508(c) states, "Web pages shall be designed so that all information conveyed with color is also available without color, for example from context or markup." No tool can verify this. It is up to the agency to verify that this requirement and other subjective requirements are met. There are numerous online sites that can validate a page, and various tools can be used to validate an entire site. While the online tools are beneficial during development of a site, it is necessary to do a thorough validation of an entire site prior to production release. Validation documentation should be kept with a site's project documentation. Compliance Sheriff is available as an Enterprise-wide validation tool for testing and reporting accessibility, privacy, search ability and usability standard. Approved Products: • Compliance Sheriff (HiSoftware) • InFocus (SSB BART Group) • Rational Policy Tester	**Effective:** 5/2/2002 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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7025						Accessibility Edition (IBM)		
7360	Electronic Commerce – Magnetic Stripe Card and Reader	ISO (International Organization for Standardization) approved standard for encoding magnetic stripe data is required to interface with standard readers and the bankcard network for online transaction processing. ISO compliant stripe card readers are required.	I01.004.402	Platform > Peripheral > Computer Input Device	Inputs are the signals or data received by the system, and outputs are the signals or data sent from it. For the purposes of the IRM, computer input devices are those that provide data to the machine/application combination for further processing or for manipulation by users through the human-computer interface devices.		**Effective:** 7/1/1997 **Revised:** 11/10/2000 **Reviewed:** 6/17/2015	
7400	PBX – Telephone Public Exchange	The Commonwealth of Kentucky has adopted a standard of two manufacturers of Telephony PBX systems, Avaya and Tadiran. This standard has been established to reduce expenditures in maintaining replacement/repair inventory and in training costs of personnel and associated expenditures.	I01.003.KY003	Platform > Communications Hardware > PBX (Private Branch Exchange)	A PBX (Private Branch Exchange) is a telephone system within an enterprise that switches calls between enterprise users on local lines while allowing all users to share a certain number of external phone lines.	Approved Avaya products are: • Business Communications Manager (BCM) Series, • Communication Server (CS) 1000 Series, CS2100, • and related survivable Gateways. Approved Tadiran products are: • Coral Octel is approved for existing replacement only.	**Effective:** 7/1/1997 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7410	Voice Mail (VM) Services	All implementation and usage of Voice Mail systems must adhere to the following minimum acceptable standard. This standard represents acceptable usage and should not adversely affect technology costs. Adherence to this standard is expected regardless of the specific product installed. Effective with issuance of this standard, any and all voice mail system must adhere to this standard. Any exception will be reviewed on a case by case basis. VM equipment currently in place may continue to be used and maintained. When it has reached the end of its useful life and the cost of repair or upgrade exceeds its value, replacement should be considered. The "press 0" option must be announced within the first 15 seconds of the recorded greeting. Staff should also receive training on the proper way to leave greetings and messages in voice mail. All Agency Telephone Coordinators will be trained on proper installation and configuration of these systems. This training can be coordinated through the COT's Telecommunication Branch. Please see the suggested "Best Practice" statement on page 15 of the document at https://gotsource.ky.gov/docushare/ds web/Get/Document-301114/	A02.030.KY005	Application Components > Unified Communications and Collaboration > Voice Mail	Voice Mail is a centralized electronic system that can store messages from telephone callers.	Approved products are • Avaya • Octel These systems are currently bundled with both Voice Mail and Auto Attendant. For best results, the Voice Mail product must be compatible with the currently installed voice system. When it is determined that Voice Mail is required, configuration and consulting assistance may be obtained from COT by submitting a request to the Commonwealthservicedesk@ky.g ov or call 502-564-7576	**Effective:** 3/1/2001 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
7415	Enterprise & Desktop Voice Services	Standard features for all office workers entitled to a phone: • Re-dial • Analog single-line Phone • Hold • Individual extension/number • Volume control • Call Transfer • Touch Tone (where available) • Standardized color-Black • Accessibility to Voice Mail • Simple documented instructions on how to use features Available features if needed for ADA compliance: • Digital, Programmable Display Phone • Caller ID (where available and policy allows) • Intercom calling • Call Forwarding • Availability of ADA compliant instruments where needed • Multi-line • Speaker Phone • Call Pick-up • Call Parking • Headsets • Remote access to voice mail • Waiting voice mail notification through a stutter dial tone or flashing light. Additional features available to operators/help desk/call center attendants: • Headsets • Direct Station selection (multi-button instrument) • Busy Display • Call Management Tools Standard enterprise features available for all offices: • 800/888 services (part of KIH) • 900 services • 911 services (NENA guidelines prevail) • Access and account codes • ACD • Auto Attendant	I01.003.302	Platform > Communications Hardware > Telephony Handset	A telephony handset is a device the user holds to the ear to hear the audio sound, usually containing the phone's microphone.	Approved products are: • Avaya • Tadiran	**Effective:** 7/1/2000 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
7415		• Lobby and common areas (Local and 800 calls only) • Elevators (controlled by the elevator company) • Conference rooms (full access except 900 services & International calling) • Conference speaker phones • Common labels on all phone buttons • Music on hold (MUZAC or recorded announcements such as what the agency offers, business hours etc.) • Single number to call for service 502-564-7576 for moves adds or changes Long distance (LD) use is restricted to government business (employees should use personal calling cards or personal cell phones). See the suggested "Best Practice" statement page 15 of this document.					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7420	Automated Attendant Systems	All implementation and usage of Automated Attendant systems must adhere to the following, minimum acceptable standard. This standard represents acceptable usage and should not adversely affect technology costs. Adherence to this standard is expected regardless of specific products installed. • Adherence to all ADA requirements will be required for the use of special devices such as the TTY/TDD. • All Agency Telephone Coordinators will be trained on proper installation and configuration of these systems. This training can be coordinated through the COT's Telecommunication Branch. See the suggested "Best Practice" statement page 16 of this document.	A02.030.KY001	Application Components > Unified Communications and Collaboration > Automated Call Attendant	Software that allows callers to be automatically transferred to an extension without the intervention of an operator/receptionist). Many such software will also offer a simple menu system ("for sales, press 1, for service, press 2," etc.). An auto attendant may also allow a caller to reach a live operator by dialing a number, usually "0".	Approved products are: • Avaya • Octel These systems are currently bundled with both Voice Mail and Auto Attendant. For best results, the Voice Mail product must be compatible with the currently installed voice system. When it is determined that an Automated Attendant is required, configuration and consulting assistance may be obtained from COT by email the Commonwealthservicedesk@ky.gov or calling 502-564-7576	**Effective:** 3/1/2001 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7425	Automated Call Distribution Systems (ACD)	All implementation and usage of an ACD system must adhere to the following, minimum acceptable standard. This standard represents acceptable usage and should not adversely affect technology costs. Adherence to this standard is expected regardless of specific products installed. • Equipment currently in place can continue to be used and maintained. When it has reached the end of its useful life and the cost of repair or upgrade exceeds its value, replacement should be considered. • An ACD should only be placed upon incoming customer lines. These lines frequently come into a call center or help desk environment. • If the ACD is used in conjunction with an Automated Attendant, all standards for that product must also be followed. See the suggested "Best Practice" statement page 16 of this document.	A02.030.KY002	Application Components > Unified Communications and Collaboration > Automated Call Distribution Systems (ACD)	Automated call distribution system, is a device or system that distributes incoming calls to a specific group of terminals or agents based on customer need, type, and agent skill set. It is often part of a computer telephony integration (CTI) system.	Approved products are: • Avaya: o Contact Center 6.0 (CC6) or higher • Tadiran: o Coral Call Center Jet	**Effective:** 3/1/2001 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7430	Interactive Voice Response (IVR) Services	All implementation and usage of IVR systems must adhere to the following, minimum acceptable standard. This standard represents acceptable usage and should not adversely affect technology costs. Adherence to this standard is expected regardless of specific products installed. • Equipment currently in place can continue to be used and maintained as long as it continues to be compatible with the switch platform. When it has reached the end of its useful life and the cost of repair or upgrade exceeds its value, replacement should be considered. • Adherence to all accessibility and ADA requirements will be required for the use of special devices such as the TTY/TDD. • If required, IVR systems must be programmed to interface with appropriate relational database management software product standards defined in KITS. Configuration and consulting assistance must be obtained from COT's Division of Communication Services, Network Engineering Branch, for these systems. See the suggested "Best Practice" statement page 16 of this document.	A02.030.KY006	Application Components > Unified Communications and Collaboration > Interactive Voice Response (IVR) Services	Interactive voice response (IVR) is a technology that allows a computer to interact with humans through the use of voice and DTMF tones input via keypad.	There are two vendors approved to provide outsourced IVR consulting, applications development, integration, implementation and operational support services. These are: • Anexsys • GovConnect	**Effective:** 3/1/2001 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7435	Computer and Telephone Integration (CTI) Systems	All implementation and usage of CTI systems must adhere to the following, minimum acceptable standard. This standard represents acceptable usage and should not adversely affect technology costs. Adherence to this standard is expected regardless of specific products installed. • Equipment currently in place can continue to be used and maintained. When it has reached the end of its useful life and the cost of repair or upgrade exceeds its value, replacement should be considered. • Some CTI applications can be very proprietary, requiring specialized equipment and telephones. These systems must be avoided in favor of "open" systems and architectures that can function with Web interfaces and other newer technologies that may become available. • CTI systems must be compliant with existing database standards as defined in the Commonwealth of Kentucky IT Enterprise Architecture and Standards documents. • Sensitivity and security need to be considered when phrasing the questions and gathering the data during one of these sessions. The data collected and stored in a database must adhere to existing security and privacy standards adopted by the Commonwealth. (Reference Web site: Chief Information Security Officer - Services) • When these systems are used to conduct e-Business by buying products, authorizing payments, etc., care should be taken as it relates to security and privacy issues. (Reference standard 5515 "Secure Transport".) • Adherence to all ADA requirements will be required for the use of special devices such as the TTY/TDD.	I01.005.KY001	Platform > Virtualization > Computer and Telephone Integration (CTI) Systems	Computer and Telephone Integration (CTI) Systems allow interactions on a telephone and a computer to be integrated or coordinated.	Approved products are: • Alcatel-Lucent • Avaya	**Effective:** 3/1/2001 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7440	VoIP	VoIP must be delivered in a secure environment. Category 5 Cabling infrastructure is the minimum requirement. The agencies network switches and data circuitry must be able to accommodate the VoIP application. POE must be available. The VoIP solution must be able to interface with all applications in the related categories. See VoIP IT Standard General Requirements (page 16 of this document) for: • Switch Acceptance • Network Event Analysis	I02.004.401	Network > Transmission Type > Voice over IP (VoIP)	Voice over IP (VoIP, or Voice over Internet Protocol) commonly refers to the communication protocols, technologies, methodologies, and transmission techniques involved in the delivery of voice communications and multimedia sessions over Internet Protocol (IP) networks, such as the Internet. Other terms commonly associated with VoIP are IP telephony, Internet telephony, Voice over Broadband (VoBB), broadband telephony, IP communications, and broadband phone. Internet telephony refers to communications services — voice, fax, SMS, and/or voice-messaging applications — that are transported via the Internet, rather than the Public Switched Telephone Network (PSTN). The steps involved in originating a VoIP telephone call are signaling and media channel setup, digitization of the analog voice signal, encoding, packetization, and transmission as Internet Protocol (IP) packets over a packet-switched network. On the receiving side, similar steps (usually in the reverse order) such as reception of the IP packets, decoding of the packets and digital-to-analog conversion reproduce the original voice stream. Even though IP Telephony and VoIP are terms that are used interchangeably, they are actually different; IP telephony has to do with digital telephony systems that use IP protocols for voice communication, while VoIP is actually a subset of IP Telephony. VoIP is a technology used by IP telephony as a means of transporting phone calls.	Approved products are: • Avaya	**Effective:** 4/15/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
7445	VoIP softphone	VoIP must be delivered in a secure environment. The agencies network must be able to accommodate the VoIP application. The VoIP solution must be able to interface with all applications in the related categories. The softphone is a software application loaded on a desktop or laptop computer that enables the employee to utilize the computer keyboard, microphone, and speakers to make and receive calls. Operation is dependent on version of computer hardware/software.	A02.030.363	Application Components > Unified Communications and Collaboration > Instant Messaging	Software that supports text, voice and/or video communications between two or more users.	Approved products are: • Avaya i2050	**Effective:** 4/15/2009 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	
7450	Desktop Unified Messaging / Faxing	Desktop messaging will be available on employee's desktop computer with the correct version of computer operating software and correct version of Microsoft Outlook. Manufacturer specifications will need to be adhered to in compliance with approved standards for operating systems and email.	A02.030.363	Application Components > Unified Communications and Collaboration > Instant Messaging	Software that supports text, voice and/or video communications between two or more users.	Approved products are: • Avaya	**Effective:** 4/15/2009 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	

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7560	Enterprise Directory Services	Single primary forest multiple domain architecture with cabinets as domains or organizational units (OU) and agencies designated as organizational units (OU). Requests for separate Cabinet Level forests are required.
		• Enabled for Lightweight Directory Access Protocol (LDAP); LDAP version 2 and LDAP version 3.
		• IP based Domain Naming System (see Category 4005).
		• Support for X.400 messaging protocol.
		• Compatible with Enterprise Standards product(s) in Category 2600 - Electronic Mail.
		• Compatible with Enterprise Standards product(s) in Category 3300 - Router and Category 5700 - Firewall.
		• Multiple platform server support: Approved Windows products in Enterprise Standards Category 2110 – Operating System Server.
		• Multiple desktop client operating systems support Windows products in Category 2100 – Operating System (O/S) – Desktop and Laptop/Notebook.
		• Active Directory Federated Services - Webservices\SAML 2.0 tokens
		  ADFS 1.0 - Windows Server 2003 R2 (additional download) - end of life July 2015
		  ADFS 1.1 - Windows Server 2008 and Windows Server 2008 R2 - end of life July 2015
		  ADFS 2.0 - Windows Server 2008 and Windows Server 2008 R2 - end of life July 2015
		  ADFS 2.1 - Windows Server 2012 - end of life July 2015
		  ADFS 3.0 - Windows Server 2012 R2
			A02.029.340	Application Components > Security Controls > Authentication and Authorization	Software that supports obtaining information about parties attempting to log on to a system or application for security purposes and the validation of those users.	Approved products are:
						• Microsoft Active Directory
							Effective: 2/1/2000
							
							Revised: 6/17/2015
							
							Reviewed: 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
8100	Application Development Methodology and Software	Structured Analysis & Design - Commonwealth Office of Technology's Systems Development Life Cycle (SDLC) Methodology (COT-140) RUP: Rational Unified Processing: Implementing Features from RUP AND UML BASED design and analysis OOAD: Object Oriented Analysis and Design	B10.813.326	General Government > Support delivery of state services > IT System Development / Integration Support	IT System Development / Integration Support includes the software services enabling elements of distributed business applications to interoperate and the software development necessary to facilitate such integration. These elements can share function, content, and communications across heterogeneous computing environments.	Design/Analysis/Data Modeling: Design Tools: • Microsoft - Excel • Microsoft - Visio • Microsoft - Word • Rational Software Architect Data Modeling: • CA - ERwin Data Modeler Analysis/Design/Modeling Library: • Docushare *Not for new installations. • Microsoft Visual SourceSafe *Not for new installations. Mainstream support slated to end 7/10/2012; Extended Support slated to end 7/11/2017 • Microsoft Team Foundation Server Design Patterns: • GoF (Gang of Four) Patterns Extensibility Frameworks Developer Productivity Tool: • ReSharper 8 for Visual Studio Extension	**Effective:** 7/1/1997 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
8200	Application Development Platform	The Commonwealth of Kentucky has adopted a standard which mandates that every state agency developing or purchasing new departmental or enterprise applications must utilize one of the six application development platforms described below. Four of the platforms address legacy and traditional applications, while the final two platforms address applications intended for wireless and mobile platforms. Applications that will be accessed primarily via desktop or laptop computers must utilize one of the following five application development platforms, or a combination thereof. 1.Windows DNA/COM+ Platform (not for new installations)(Distributed interNet Applications Architecture) Microsoft combined its Component Object Model + (COM+) Technologies into a single overarching platform called Windows DNA. The platform provides an overall architecture that includes Microsoft's formerly separate ActiveX, COM/DCOM, and other Microsoft component technologies. Classic ASP Applications Using IIS 5.0 below. 2. Microsoft .NET Platform - the most recent topology of applications prescribed by Microsoft and implemented in most Microsoft development tools and runtime middleware. .NET includes the .NET Framework, a runtime multi-language application platform, and COM+, a transaction integrity extension to the Framework. .NET supports multiple programming models, including XML Web services, WebForms, WinForms and others: a. Biztalk 3. IBM z/OS Platform (the z/OS and earlier MVS platforms were characterized by applications written in	A02.022.240	Application Components > Development Environment and Tools > Integrated Development Environment	Software that provides comprehensive facilities to computer programmers for software development.	For the .NET development environment: Comprehensive development suite for the .NET development environment: • Telerik DevCraft DevTools • Infragistics Controls • Microsoft Visual Studio .NET, including: o Enterprise Architect 2010, 2008, 2005, & 2003* o Enterprise Developer 2010, 2008, 2005, & 2003* o Professional 2010, 2008, 2005, & 2003* For the z/OS, UNIX, & J2EE environments: • Eclipse • Hiperstation • Interactive Productivity Services Facility (ISPF) • Rational Application Developer • Rational Developer for z • Rational Software Architect for WebSphere Software • Rational Team Concert • Rational UrbanCode • Syncsort • Xceed Zip For the JAVA development environment • Spring Hibernate Legacy tools for the Windows DNA/COM+ environment: • Centura Team Developer • Enterprise COBOL for z/OS (IBM) • Job Control Language (JCL) • VB Scripts and Java Scripts • Visual Basic • Visual C++ • Visual J# • Visual Studio Legacy tools for the z/OS, UNIX, & J2EE environments: • C and C++	**Effective:** 2/18/2009 **Revised:** 7/24/2015 **Reviewed:** 7/24/2015

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8200		COBOL, or Telon, executing under one of the following environments, while possibly accessing QSAM, VSAM, IMS/DB or DB2 for data access) a. Batch Execution Environment – This environment is characterized by executing under control of JES (Job Entry Subsystem) with JCL (Job Control Language). These jobs are usually scheduled with CA-Scheduler. Programs execute as steps within these jobs and are developed with various languages (including Enterprise COBOL, HASM, SAS, etc.) that usually run under LE (Language Environment). b. IMS Subsystem – The IMS subsystem is a transaction monitor that executes programs as transaction within specified IMS transaction regions. Programs execute as transactions or subprograms and are developed with various languages (including Enterprise COBOL, HASM, etc.) that run under LE (Language Environment). Development in this environment is deprecated. c. CICS Subsystem – The CICS subsystem is a transaction monitor that executes programs as transactions. Programs execute as transactions or subprograms and are developed with various languages (including Enterprise COBOL, HASM, etc.) that run under LE (Language Environment). Development in this environment is deprecated. d. IBM Message Broker platform – This is the IBM Message Broker platform that runs with IBM WebSphere Application Server. This serves as an Enterprise Service Bus and acts as a broker for application integration. Software is developed using IBM Message Broker Toolkit within the Rational Application Developer Suite. 4. UNIX Platform (the traditional UNIX platform is characterized by applications written in C or C+, executing on SUN or IBM UNIX servers,				• Enterprise COBOL for z/OS • ISPF Dialog Management Facility • PKZip for MVS • REXX/CLIST • SAS (Statistical Analysis System) • Scheduler • Sybase Client ASE 15 • Syncsort • Telon Development Facility • VisualAge C++ • VisualAge COBOL *Not for new development. • Visual Age Enterprise Suite • WebSphere • Xpeditor (Compuware) Data Access Tools: • Aqua Data (DB2) • File-AID (IMS, DB2, RDX) • InSync (FILE) • Oracle SQL Developer • PL/SQL (Oracle) • SQL Server Management Studio • Progress DataDirect Shadow (DB2) • Query Management Facility (DB2) • SPUFI (DB2) • Squirrel (DB2) • TOAD (Oracle) • VSAM Assist (VSAM) Reporting Tools • See 2310 – Business Intelligence Software • IBM SPSS • Report Distribution System (RDS) Developer Support Tools: • EditPlus • Gimp (graphics editor) • IBM Redbooks • Librarian • Microsoft Developer Network • Microsoft TechNet • Microsoft Visual SourceSafe Classic for (Microsoft Legacy Applications) CA-Librarian (z/os)	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
8200		while accessing data stored in Oracle databases) 5. Java 2 Platform, Enterprise Edition (Java EE) - a Sun Microsystems-sponsored architecture specification that prescribes application architecture for Java-based business applications. Java EE is implemented by multiple vendors and includes a J EE application server combined with Java EE message-orientated middleware. Programming models of Java EE include Java Server Pages, servlets, Session EJB and entity Enterprise JavaBeans. State agencies developing or purchasing new, wireless departmental or enterprise applications that will be accessed primarily via wireless phones and PDAs must utilize one of the following two application development platforms: 1. Microsoft .NET Compact Framework - provides tools for developing mobile applications on Pocket PC devices and the Microsoft Smartphone. 2. Java 2 Platform, Micro Edition (J2ME) - a version of Java that is defined by Sun Microsystems for use in devices such as mobile phones. J2ME is part of a set of related Java technologies that includes definitions of profiles and configurations for application developers.				• Microsoft Windows Software Development Kit • Notepad++ • Notepad XML • PCO (Production Cutover) • Rational ClearCase (Source Control) • Junit • Log4J • Textpad • Toad-for-Oracle Other Tools: • Abend-Aid (Error Analysis) • CA Platinum • Compuware File-AID (z/os) • Compuware Xpediter (z/os debugging) • CSLA (.net Framework) • DataFlux • DB2 for z/os (Database Manager) • DCD III (COBOL Cross Ref/Documenter) • Dollar Universe • DynamicPDF Generator.NET • File-AID • FileMaker Pro • FxCOP (code walkthrough Microsoft) • IBM QMF/SPUFI • InSync • JCL Check (JCL Verification/Standardization) • Metalogix StoragePoint • Nunit (unit Test Microsoft) • PHIN MS • Program Analyzer (COBOL Source Analysis) • Qbase • Query Management Facility (QMF) • Rational Rhapsody • Resource Access and Control Facility (RACF) (System Security) • Spool Display Sysout Facility (SDSF) (Job Queue Access) • SPUFI	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
8200						• Strobe/iStrobe (Z/OS Profiler) • ULS Viewer • VSAM Assist	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
8300	Application Development Quality Management Software	Application Development Quality Management Software tools provide features to assist in testing activities such as: load/stress testing, functional/regression testing, requirements traceability and security assessments. Need a limited product set for: economies-of-scale with respect to procurement, skills transferability required by a mobile workforce, data interchange between state government agencies, skills requirements for a competency team development environment. Approved Standards: • International Organization for Standardization (ISO) • Compliance with Section 502, WCAG 1.0, WCAG 2.0, CLF, XAG Standards Technical and Implementation Considerations: The advent of service-oriented architecture (SOA), increasing complexity and more regulations are renewing the focus on raising quality efforts, through more-effective approaches. This increases the need for solutions that are well-integrated across the application life cycle, not only during the development cycle but also into production. Emerging Trends and Architectural Directions: Requirements for testing products have changed from testing the product in isolation to integrating the testing with the rest of the product's life cycle, and to support collaboration across the QA team and among the entire project team. Therefore, IT organizations should focus on testing workflow and quality management issues across the organization when selecting a set of tools.	A02.022.245	Application Components > Development Environment and Tools > Validation Tools	Software tools that check web pages for accessibility and syntactical correctness of code.	Automated Load/Stress Testing: • Mercury LoadRunner (Hewlett Packard) Requirements Management/Traceability: • Mercury Quality Center (Hewlett Packard) Defects Tracking: • Mercury Quality Center (Hewlett Packard) • Seapine Software TestTrack Professional • Team Foundation Suite • Visual Studio Team Suite Accessibility Validation and Repair: • HiSoftware AccRepair • HiSoftware AccVerify • HiSoftware Compliance Sheriff Application Security Assessments: • Hewlett Packard WebInspect	**Effective:** 2/18/2009 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	

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9996	Risk Management		A02.027.322	Application Components > Process Automation and Management > Risk Management	Software that allows planners to explicitly address uncertainty by identifying and generating metrics, setting parameters, prioritizing, and developing mitigations, and tracking risk.	• TeamMate AM- Audit Management	**Effective:** 7/23/2015 **Revised:** 7/23/2015 **Reviewed:** 7/23/2015	
9997	Low to Medium (1500/4000 pages per day max) Volume Scanners – Digital Imaging	These scanners are for single users. • Hi-Speed USB 2.0 connection • 24-bit color, 8-bit grayscale, 1-bit black & white scanning • Letter/Legal paper scan • Optical Resolution of 300 DPI or greater • 20 ipm or greater (low) • 100 ipm or greater (Medium)	I01.004.402	Platform > Peripheral > Computer Input Device	Inputs are the signals or data received by the system, and outputs are the signals or data sent from it. For the purposes of the IRM, computer input devices are those that provide data to the machine/application combination for further processing or for manipulation by users through the human-computer interface devices.	Xerox MPS www.ky-mps.com Also see information on the scanning service offered by the Kentucky Department of Libraries and Archives.	**Effective:** 6/17/2015 **Revised:** 6/17/2015 **Reviewed:** 6/17/2015	

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10005	Project Management Framework	A project is defined as a temporary undertaking for a specific purpose that creates specific, unique results. This Framework will assist agencies within the Commonwealth with the management of their projects to help assure successful completion on time, within budget and that they meet the specific requirements identified. The Framework organizes project management into five tightly integrated, repeatable phases that take place throughout a project's life cycle that must be applied in all Commonwealth IT projects. These phases include: • Initiate Phase. Project Initiation activities occur before the project actually begins and answers the questions why, what and how. Why the project needs to occur, what the project will produce and how the desired product will be developed. Successful projects establish well-defined business goals, objectives and measures of success. • Plan Phase. Project Planning activities translate the high level concepts defined during Project Initiation into product requirements that in turn establish the scope of the project. Once the project scope is defined, project planners develop the project schedule and estimate project cost. Project Planning also involves defining the project organization and communication structures and developing the management processes that will be used throughout the project. • Execute Phase. Project Execution activities involve coordinating resources to complete the work defined in the project management plan to satisfy the project: people are working on their assigned tasks, project manager and/or team leads are	B10.813.538	General Government > Support delivery of state services > Program / Project Management	Defines the set of capabilities to manage and control a particular effort of an organization. This includes intra-agency work.		**Effective:** 9/15/2003 **Revised:** 11/18/2009 **Reviewed:** 6/17/2015	

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
10005		checking on the progress, status reports are being distributed to the stakeholders and sponsor in accordance with the Communication Plan, the project team is keeping an eye on assigned risks, and so forth. • Monitor and Control Phase. Monitor and Control activities involve tracking, reviewing and regulating the progress and performance of the project; identify any areas in which changes to the plan are required, and initiate the corresponding changes. • Close Phase. Project Closeout activities include obtaining formal acceptance of the project, documenting lessons learned throughout the project and organizing project documentation for archiving. Each of the above phases is composed of a series of project management processes, which are described more fully in the Enterprise Project Management Framework. The Commonwealth Office for Technology (COT), Office of Enterprise Technology is responsible for maintaining and updating the Enterprise Project Management Framework. Although the Framework organizes project management processes sequentially, each process is interrelated and should be conducted iteratively as multiple processes interact. In addition, the Framework describes activities that are typically performed to complete each process. The project manager must assess the characteristics of their specific project and determine the project management processes that are required for each phase.					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date	
10100	Project Management Software		A02.027.319	Application Components > Process Automation and Management > Project Management	Software that provides capabilities for cost estimation and planning, scheduling, cost control and budget management, resource allocation, collaboration, communication, quality management and documentation or administration systems, which are used to deal with the complexity of large projects.	• Microsoft Project • Open Workbench	**Effective:** 9/15/2003 **Revised:** 2/16/2011 **Reviewed:** 6/17/2015	
10200	Project Management Information System		A02.027.319	Application Components > Process Automation and Management > Project Management	Software that provides capabilities for cost estimation and planning, scheduling, cost control and budget management, resource allocation, collaboration, communication, quality management and documentation or administration systems, which are used to deal with the complexity of large projects.	• Clarity • Microsoft Project Server	**Effective:** 9/15/2003 **Revised:** 7/1/2008 **Reviewed:** 6/17/2015	